



THE UNIVERSITY OF QUEENSLAND
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**Investigating the motivation and personal traits of allied health
professionals working in remote and rural Australia:
The Remote and Rural Allied Health Motivation
and Personality (RRAHMP) study**

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Abstract

Background: Allied health (AH) workforce shortages in remote and rural Australia contribute to poorer health outcomes for residents in those areas. This gap in health workforce has long been recognised as problematic and persists despite strategies for improving recruitment and retention of AH professionals. This thesis reports on a new approach to addressing the recruitment to, and retention in, remote areas of AH professionals by investigating the personal traits and motivation characteristics of AH professionals with and without remote area work experience. Recent research has shown that the nursing and medical professions can be differentiated by personality traits, but little is known about the personality traits of AH professionals. Therefore, this research aimed to address that knowledge gap.

The aim of the study was to identify the personality traits and motivation characteristics that might assist an individual to 'thrive' rather than 'survive' in the remote work environment. It did this by asking two research questions. First, what are the personal traits exhibited by novice and experienced AH professionals? The question sought in particular to identify traits associated with remote work experience. Second, how is working in remote areas construed, or perceived, in terms of the personal and motivation characteristics that contribute to success?

Methods: The convergent parallel mixed methods design comprised two strands of data collection (QUAN+QUAL/QUAN).

Strand 1 used a biopsychosocial trait model of personality, operationalised through the Temperament and Character Inventory – Revised 140 (TCI). Data were collected using an online survey. Snowball sampling through Services for Australian Rural and Remote Allied Health achieved a sample size of 562 AH professionals, with full demographic data and a completed TCI. Dependent variables were the TCI dimensions, while independent variables were remote experience, gender, age, profession and grouping of the professions as either person- or technique-oriented. Analysis was descriptive of the whole sample and comparative between groups using independent samples *t*-test, ANOVA and subsequent two-way ANOVA with 95% confidence level.

Strand 2 used Personal Construct Psychology's key technique, the repertory grid interview, to understand how AH professionals construed working in remote areas, in terms of the personal traits and motivation that contribute to success. Participants ($n=34$) were a purposively selected subset of Strand 1. The repertory grid interviews produced both

qualitative and quantitative data. These were analysed qualitatively to identify the personal and motivation characteristics, and quantitatively using singular value decomposition and Euclidean distance to compare differences construed by participants between remote and other AH work situations.

Results: The following key findings were determined from personality trait results, together with the repertory grid results:

- The AH professionals appear to have mature personality characteristics, i.e. high or very high levels of Reward Dependence, Persistence, Self-directedness and Cooperativeness.
- The AH professionals with remote experience had higher Novelty Seeking and average Harm Avoidance levels compared with AH professionals without remote experience.
- Younger AH professionals tended towards higher Harm Avoidance levels.
- No single combination of temperament and character traits was prescriptive of successful recruitment to, and long-term retention in, remote work. While higher Novelty Seeking and average Harm Avoidance appeared to be a trait combination suited to working in remote environments, interaction between traits in conjunction with the context of the individual is paramount. This interaction ultimately determines behaviour, decisions and fit with the demands of the work environment.
- The context of the individual included self-assessed suitability to remote work; life-stage; personal construing about ideal career and work role; and previous familiarity with remote work.
- The trait levels exhibited by the Strand 1 remote AH professionals were reflected in the Strand 2 sample's construing about the personal attributes of a successful remote AH professional, suggesting congruence between the empirical trait measurement and the sample's perceptions about 'what it takes' to work in remote areas.

Discussion: This research created new in-depth knowledge about personal and motivation characteristics of AH professionals suited to remote work. The thesis has made an important and novel contribution, including a range of evidence-based policy recommendations regarding recruitment to, and retention of, AH professionals in remote Australia.

For recruitment, these recommendations include understanding the insights of individual AH professionals into their suitability for remote work and what it means to them to work in remote areas. This approach facilitates tailoring appropriate supervision and support, clarifying expectations about the role before employment, and developing career opportunities. Enhancing retention requires remote workplaces to develop strategies for novices that may look different from strategies for experienced AH professionals. In particular, higher Harm Avoidance in younger professionals requires same-profession support and supervision, strategies that facilitate personal engagement with the community, and overt career opportunities. Proper recognition and valuing of the expertise developed by remote generalist AH professionals *via* career pathways is important for retention of experienced AH professionals.

Declaration by author

This thesis ***is composed of my original work, and contains*** no material previously published or written by another person except where due reference has been made in the text. I have clearly stated the contribution by others to jointly-authored works that I have included in my thesis.

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Publications during candidature

Peer-reviewed published papers

Campbell, N., McAllister, L., & Eley, D. S. (2012). The influence of motivation in recruitment and retention of rural and remote allied health professionals: A literature review. *Rural and Remote Health*, 12(2), 1900. (Online) 2012. Available: <http://www.rrh.org.au>

Campbell, N., Eley, D. S., & McAllister, L. (2013). What does personality tell us about working in the bush? Temperament and character traits of Australian remote allied health professionals. *Australian Journal of Rural Health*, 21(5), 240-248. doi: 10.1111/ajr.12047

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Contributor	Statement of contribution
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Contributions by others to the thesis

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Personality, motivation, traits, repertory grids, allied health, remote, rural, workforce, recruitment, retention

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ANZSRC code: 170109 Personality, abilities and assessment, 30%

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List of Abbreviations

ABS	Australian Bureau of Statistics
AHPRA	Australian Health Practitioner Regulation Agency
ANOVA	Analysis of Variance
AH	Allied health
ASGC-RA	Australian Standard Geographical Classification of Remoteness Areas
PCP	Personal Construct Psychology
PD	Professional development
PO	Person-oriented
RA1–RA5	Remoteness areas designations (see ASGC-RA above)
RA1	Major city
RA2	Inner regional area
RA3	Outer regional area
RA4	Remote area
RA5	Very remote area
RRAHMP	Rural and Remote Allied Health Motivation and Personality study
SARRAH	Services for Australian Rural and Remote Allied Health
SVD	Singular value decomposition
TCI	Temperament and Character Inventory
TO	Technique-oriented

Glossary

Allied health: a collective term for a number of diverse, individual health professions, often defined as non-medical and non-nursing. This PhD used the definition endorsed by SARRAH as ‘Tertiary qualified health professionals who apply their skills to diagnose, restore and maintain optimal physical, sensory, psychological, cognitive and social function. They are aligned to each other and their clients’ (Lowe, Adams, & O’Kane, 2007). Professions eligible for participation in this study were Aboriginal Health Worker, audiology, chiropractic, nutrition and dietetics, exercise physiology, medical laboratory science, medical radiation science (diagnostic and therapeutic radiography, nuclear medicine, sonography), occupational therapy, optometry, oral health professions (dentists/hygienists/therapists), orthoptics, orthotics and prosthetics, osteopathy, pharmacy, physiotherapy, podiatry, psychology, social work and speech pathology.

Boot strapping: A qualitative analysis process used with repertory grid data. Using the construct as the unit for analysis, the first construct is examined for its major theme and a code created to capture that theme. Subsequent constructs are then examined in turn and either categorised to the existing code/s or a new code is created if existing codes are not suitable (Jankowicz, 2004).

Character: In Cloninger’s biopsychosocial model of personality, the character dimensions represent intentional responses, values and goals based on learning, insight and maturation. In this way, character dimensions are observed as modifiable responses based on socio-cultural learning. The three character dimensions are Self-directedness, Cooperativeness and Self-transcendence. See also Table 2-3.

Constructs (or personal constructs): The hypotheses an individual makes in order to understand their experiences. Constructs are bipolar, representing two ends of a continuum of belief. In repertory grid interviews, these statements of personal belief or understanding are provided by a participant and related to a topic of the interview. In combination, these statements represent the participant’s **construing** on the topic. (See also Repertory grid interview.)

Constructive Alternativism: The philosophical position underpinning Personal Construct Theory which assumes that the world can be interpreted in a variety of ways, and therefore individuals actively impose constructions or meanings on life events and other people in order to understand them (Butt & Burr, 2004). These constructions are subject to active systematic revision, or alternative interpretations and re-interpretations (Kelly, 1955a).

Cooperativeness: One of the three **character** dimensions measured by the Temperament and Character Inventory. The trait is observed as the extent to which individuals are cooperative, tolerant, empathic and principled. Low levels reflect a critical, unhelpful and revengeful approach, while high levels reflect a socially tolerant, empathic, constructive approach. See also Table 2-3.

Double-scaled Euclidean distance: In this PhD, this is also referred to as Euclidean distance, or ‘the distance’ or D_{xy} . It is a standardised measure of the similarity between two selected constructs in repertory grid interview data. It allows comparison of specific element pairs across the whole sample regardless of the number of constructs in each individual grid. Calculated in Idiogrid (Grice, 2002) using the formula shown below, it results in a distance measurement between zero and one where zero represents maximum similarity and one represents maximum dissimilarity between the two elements being compared (See also Table 3-7). Given that there are no statistical significance scores for Euclidean distance, in this PhD the distances were interpreted as the elements being more like each other (i.e. $D_{xy} < 0.5$) or less like each other (i.e. $D_{xy} > 0.5$).

$$D_{xy} = \frac{\left(\sum_{i=1}^e \frac{(G_{(ix)} - G_{(iy)})^2}{maxdist} \right)^{1/2}}{\sqrt{N_{pair}}}$$

Legend: N = number of observations in the pair; G = grid values; $maxdist$ = square of the maximum possible scale value minus the minimum possible scale value; e = elements; i = variable.

Early career allied health professionals: In this PhD early career allied health professionals had three to five years of experience.

Elements: A term in repertory grid interviews to refer to the instances or exemplars of the topic which can be meaningfully compared with each other (Kelly, 1955a). In this PhD, the elements were allied health (AH) professional role titles which were personalised by participants to individuals they knew. Each interview allowed for six *self*-elements (Myself in: my Current position, Ideal position, Previous position, Hospital position, Next job, a Position I wouldn’t like) and six other-elements (Successful remote AH, Novice remote AH, Successful urban community AH, successful private AH, Hospital-based AH, AH role model) (See also Table 3-6). The elements of most interest in this PhD were *Ideal*, *Current*, *SuccessfulRemote*, *NoviceRemote*, *HospitalOther*. (For readability, the element names are shortened and written in italics.)

Experienced allied health professional: In this PhD, experienced allied health professionals had more than five years of experience.

Extrinsic incentives: Motivation incentives provided by the workplace, including such factors as salary, leave allowances and professional development provisions. Extrinsic incentives act to prevent job dissatisfaction but do not directly add to job satisfaction, and are therefore termed ‘hygiene factors’ (Herzberg, Mausner, & Snyderman, 1959, p. 113).

Five Factor Model: The prevalent **trait theory** of personality referred to as the Big Five and most recently developed by McCrae and Costa (1997). The five dimensions of personality in the Five Factor Model are Extraversion, Neuroticism, Conscientiousness, Agreeableness and Openness.

Intrinsic incentives: Motivation incentives that are inherent in work, i.e. the pleasure derived from the work itself (Deci, Koestner, & Ryan, 1999). They provide a reason above and beyond the extrinsic incentives to engage in the work and contribute directly to job satisfaction. An example is the pleasure derived from autonomy or challenge at work.

Harm Avoidance: One of the four **temperament** dimensions measured by the Temperament and Character Inventory. The trait is observed as pessimistic worry in anticipation of problems, fear of uncertainty, shyness with strangers, and rapid fatiguability. Low levels reflect a relaxed, confident and optimistic approach, while high levels reflect a worrying, fearful, pessimistic approach (See also Table 2-3).

Ideal element: Participant construing about the Ideal element indicated the 'perfect' job or the 'representation of his aim or direction of desired movement' (Norris & Makhoul-Norris, 1976, p. 80). The distance between the *Ideal* and *Current* could be considered an indication of job satisfaction.

Idiographic: From the Greek word, 'idios' (private, own), meaning to reveal that which is unique to the individual. (See also **Nomothetic**.)

Job satisfaction: Linked with increased retention; measured in this study by participants' self-assessed distance between their current positions and their ideal positions.

Joint display of data: A figure or table that integrates or synthesises both the qualitative and quantitative data in mixed methods research designs. It allows the researcher to compare or expand on the results beyond the findings from the individual datasets.

Laddering: A practice used to clarify the meaning of the constructs elicited during a repertory grid interview. The researcher asks 'How' or 'In what way' types of questions to uncover the core of the construct (Jankowicz, 2004).

Mixed methods: A research design which combines both quantitative and qualitative approaches because of their 'utility and credibility' (Onwuegbuzie, 2012, p. 195) in order to gain 'breadth and depth of understanding' (Johnson et al., 2007, p. 123) on the research topic, which cannot be gained through using either method alone. Mixed methods research can accommodate diverse philosophical views (Creswell, Klassen, Plano Clark, & Smith, 2011).

Motivation: Defined in this study as the reasons, beyond personal traits, that drive an individual towards a goal (Robbins, Judge, Millett, & Boyle, 2010). This PhD used the **intrinsic/extrinsic** incentives motivation framework.

Nomothetic: From the Greek word, 'nomos' (law), and signifying establishing generalisations or what is typical across cohorts or groups. (See also **Idiographic**)

Novelty Seeking: One of the four **temperament** dimensions measured by the Temperament and Character Inventory. The trait is observed as exploratory activity in response to novelty, impulsiveness and extravagance. Low levels reflect indifference, detachment and a regimented approach, while high levels reflect a curious, exploratory approach which seeks challenge (See also Table 2-3).

Novice allied health professional: In this PhD, novices were allied health professionals with less than three years' experience.

Persistence: One of the four **temperament** dimensions measured by the Temperament and Character Inventory. The trait is observed as ability to function despite frustration, fatigue and reinforcement; also observed as industriousness, determination and perfectionism. Low levels reflect an inactive, indolent and unambitious approach, while high levels reflect an industrious, hard-working and perfectionist approach (See also Table 2-3).

Person-oriented: A conceptualisation of the allied health professions developed in this PhD that described the orientation of the profession as having a leaning towards people and the entire patient, focussing on the development of a therapeutic relationship (Yufit, Pollock, & Wasserman, 1969). (See also **Technique-oriented**)

Personality: the 'dynamic organisation within an individual of the psychophysical systems that determine his unique adjustments to his environment' (Allport, 1937, 1971, p. 48). As a **mixed methods design**, this PhD utilised both a **trait approach** from the biopsychosocial model developed by Robert Cloninger and colleagues (Cloninger, Svrakic, & Przybeck, 1993), and George Kelly's **Personal Construct Psychology**.

Personal Construct Psychology: Developed by George Kelly, Personal Construct Psychology uses the metaphor of 'man-the-scientist', suggesting that individuals generate and test hypotheses about their world, which they use to predict and control their experiences. Useful hypotheses are retained as *personal constructs* which are organised into a personal construct system.

Personal Construct Psychology fundamental postulate: The underlying assumption of Kelly's Personal Construct Psychology. It states that 'A person's processes are psychologically channelised by the ways in which he anticipates events' (Kelly, 1955a, p. 103). This suggests that

an individual's construct system, their way of viewing the world, will influence behaviour and decisions.

Personal Construct Psychology corollaries: Kelly developed 11 corollaries that underpin Personal Construct Psychology. For example, the individuality corollary states that people construe events differently, and therefore an individual's constructs may be different from another's. See Table 2-5 for the list of corollaries and how they apply in this PhD.

Personal construct system: The hierarchically organised system of personal constructs specific to each individual and subject to revision based on ongoing experience (Neimeyer, 1992).

Positivism: The philosophical position usually associated with traditional quantitative research, or the so-called scientific method. It assumes that absolute truth can be found by careful observation and measurement of an objective reality, using hypothesis development and verification.

Pragmatist worldview or Pragmatism: A philosophical position on research that advocates for shared meanings, uses 'what works' and has an emphasis on employing multiple perspectives to focus on and understand the research problem, giving credence to both objective and subjective knowledge (Creswell, 2014).

Recruitment: Typically refers to the process used to find an employee to work in an organisation. Recruitment problems infer a lack of suitable candidates available for a vacant position (See also **Retention**).

Remote: The concept of being geographically at some distance from large centres, it includes lack of accessibility to services usually available in urban areas. In this study, the formal measure used is the Australian Standard Geographical Classification of Remoteness Areas (ASGC-RA) system, which quantifies the level of remoteness experienced by residents in that region. It includes five levels of remoteness from Major Cities classified as RA1, through to Very Remote Australia classified as RA5 (See also Table 1-1 and Figure 1-2).

Remote/Not Remote: Participants in Strand 1 were allocated to the 'Remote' group if they had worked in RA4 or RA5, as measured by the Australian Standard Geographical Classification of Remoteness Areas (ASGC-RA) at some point in their career, and to the 'Not Remote' group if they had never worked in RA4 or RA5.

Repertory grid interview: The best-known technique associated with **Personal Construct Psychology**, it provides insight into an individual's construct system. It is a structured interview on a topic recorded on a grid. The individual's beliefs about the topic are contained in **constructs** or statements of personal understanding elicited during the interview. The interview usually proceeds with the participant completing a systematic comparison of the **elements** in order to generate their

bipolar **constructs**. Elements can be anything related to the topic. In this PhD the elements were allied health professional roles. Participants rate each element on each construct (Fransella, Bell, & Bannister, 2004).

Retention: The amount of time between recruitment of an employee and their separation from the organisation, i.e. a measure of the length of employment in a workplace. There is no agreed definition for 'successful retention', although data for allied health professionals' median length of stay in rural areas is three years and in remote areas is two years. (Humphreys, Wakerman, Kuipers, et al., 2009) In comparison with doctors and nurses, allied health professionals have higher turnover and lower stability (Humphreys, Wakerman, Kuipers, et al., 2009) (See also **Recruitment**).

Reward Dependence: One of the four temperament dimensions measured by the Temperament and Character Inventory. The trait is observed as social reward, including sentimentality, social sensitivity, attachment, and dependence on approval by others. Low levels reflect a practical, independent and cold approach, while high levels reflect a dependent, warm and dedicated approach (See also Table 2-3).

Rural: See 'Remote'.

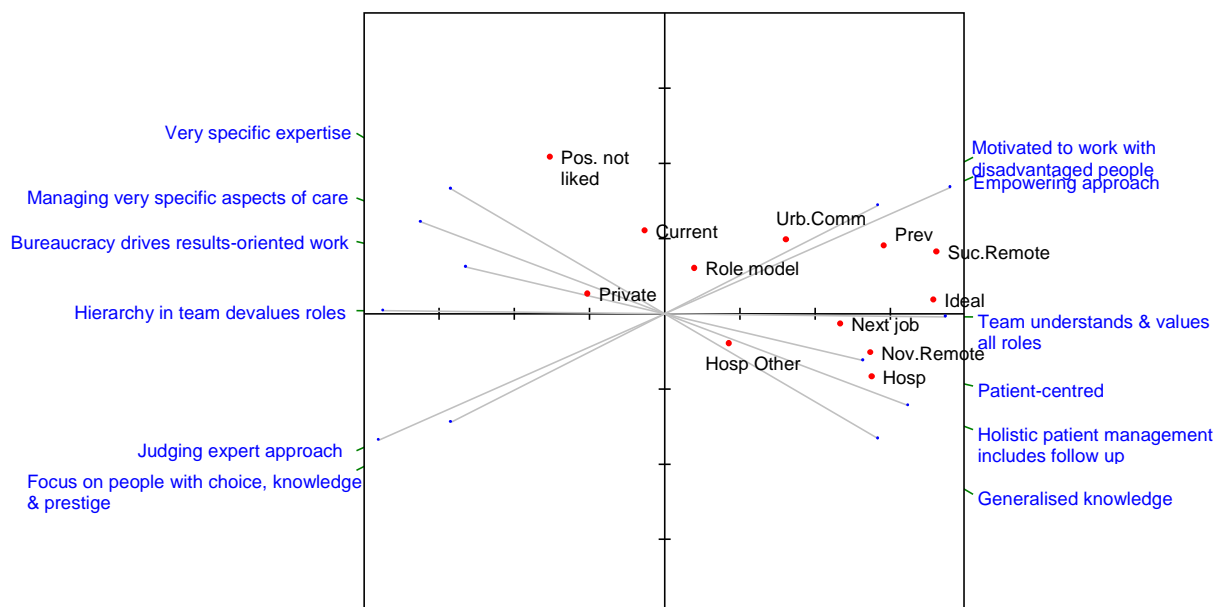
Self-assessed suitedness: A participant self-assigned attribute (Dimitrovsky, Singer, & Yinon, 1989) used in this PhD to describe the Strand 1 and 2 participants according to their remote experience (am working in remote, am not working in remote, I did work in remote but not any longer) and personal belief about whether they were suited to remote work (Suits, Might suit, Wouldn't suit, Suited for a while). Four participant categories resulted: Am/Suits; Not/Might; Not/Won't; Did/Won't. (See Table 5-3)

Self-directedness: One of the three **character** dimensions measured by the Temperament and Character Inventory. The trait is observed as the extent to which an individual is responsible, reliable, resourceful, goal-oriented and self-confident. Low levels reflect a blaming, unreliable and short-term-goal approach, while high levels reflect a responsible, purposeful and long-term-goal approach (See also Table 2-3).

Self-transcendence: One of the three character dimensions measured by the Temperament and Character Inventory. The trait is observed as the extent to which individuals conceive themselves in relation to the universe as a whole. It is observed as spirituality, practicality, materialism and modesty. Low levels reflect an impatient, practical and materialistic approach, while high levels reflect a modest, spiritual and humble approach (See also Table 2-3).

Separation: The exit of an employee from an organisation. Typically, allied health professionals in remote areas leave the region, not just the organisation.

Singular value decomposition: A multivariate statistical analysis similar to the more familiar principal components analysis. In repertory grid analysis, singular value decomposition reduces the data (elements, constructs and ratings) to a two-dimensional plot (Bell, 2003) by analysing the variance in the ratings and thus highlighting the relationships in the grid (Grice, 2002). See figure below and Figure 3-7 for an example plot. Constructs are plotted as vectors and shown in blue around the outside of the plot. Both the length and the angle of the vector can be interpreted with increasing length indicating greater variance. The angle between construct vectors in relation to other constructs shows the correlations between the ratings of the elements on those constructs, with smaller angles indicating more similar ratings (Jankowicz, 2004). The positions of the elements on the plot relative to the constructs indicate the degree of influence of the construct on the vector.



Technique-oriented: A conceptualisation of the allied health professions developed in this PhD that described the orientation of the profession as focussed on technical skills, procedures and instruments (Yufit et al., 1969) (See also **Person-oriented**).

Temperament and Character Inventory (TCI): The inventory which operationalises Cloninger's biopsychosocial model of personality (Cloninger et al., 1993). In this PhD, the TCI-Revised 140 was used; this measures seven basic dimensions of personality, i.e. four **temperament** and three **character** dimensions (See also **Temperament, Character** and Table 2-3).

Temperament: In Cloninger's biopsychosocial model of personality, the temperament dimensions represent the individual's unconscious, automatic responses that are moderately heritable, observable from childhood, somewhat predictive of adult behaviour, and relatively stable throughout life (Cloninger et al., 1993, p. 977) There are four temperament dimensions: **Novelty Seeking, Harm Avoidance, Reward Dependence** and **Persistence** (See Table 2-3).

Trait theory: Trait theories of personality emphasise individual differences in personality along basic dimensions or traits which are viewed as consistent, measurable behaviours (McCrae & John, 1992). Individual behaviour is explained by examining both the level of each dimension and the interaction between dimensions. This PhD used Cloninger's biopsychosocial model of personality which identifies seven traits: Novelty Seeking, Harm Avoidance, Reward Dependence, Persistence, Self-directedness, Cooperativeness and Self-transcendence.

Triadic presentation: A process for eliciting **constructs** used in **repertory grid** interviewing where the participant compares three **elements** at a time, describing similarities and differences between those elements.

Turnover: A measure that reflects the degree of movement of employees out of an organisation, it is calculated by the number of **separations** in a period of time, divided by the number of active workers in the same category (Humphreys, Wakerman, Kuipers, et al., 2009).

Virtual meeting or interview room: The internet-based room where the Strand 2 repertory grid interviews were held using screen-sharing software so that both interviewer and participant could see and write on the repertory grid form.

Chapter 1

Introduction

1 Introduction

1.1 Contextualising the thesis

Within Australia, beneficial healthcare outcomes are reduced by health workforce shortages and geographical maldistribution (Humphreys, Wakerman, Kuipers, et al., 2009; Mason, 2013). Accessible, effective, continuous, responsive healthcare systems are key to the health of a community (Australian Institute of Health and Welfare, 2014). Yet, remote and rural Australia experiences challenges in recruitment and retention of health professionals, particularly allied health (AH) professionals (Australian Institute of Health and Welfare, 2012; Department of Employment, 2014).

There is a considerable body of previous research and discussion on recruitment and retention problems in the health workforce, including AH professionals (Lowe, 2007). Issues and approaches discussed include:

- the lack of workforce data and profiling (Australian Institute of Health and Welfare, 2012; Lowe, 2007)
- the influence of rural background (McGrail, Humphreys, & Joyce, 2011; McKernan, Kuthy, & Kavand, 2013; Playford, Larson, & Wheatland, 2006; Strasser & Neusy, 2010; Wilson et al., 2009)
- recruitment of rural-origin students into healthcare training programs (McAuliffe & Barnett, 2009; Rodger et al., 2007; Strasser & Neusy, 2010; Wilson et al., 2009)
- rural/remote student placement opportunities (Lyle et al., 2006; Playford et al., 2006; Schoo, McNamara, & Stagnitti, 2008; Strasser & Neusy, 2010)
- alternative and more attractive models of service delivery including role re-development (Battye & McTaggart, 2003; Greater Northern Australian Regional Training Network, 2013; Productivity Commission, 2005; Turbett, 2006),
- the length of retention and financial cost of turnover (Chisholm, Russell, & Humphreys, 2011; Russell, Wakerman, & Humphreys, 2013)
- the influence of job satisfaction on retention and career path (Landon, Reschovsky, Pham, & Blumenthal, 2006)
- the need to address current inadequacies in recruitment and retention packages (Humphreys, Wakerman, Pashen, & Buykx, 2009; Morell, Kiem, Millstead, & Pollice, 2014).

Although these strategies have all contributed positively to identification of solutions to the workforce problem, the issues of recruitment and retention persist.

Personal traits have been shown to influence behaviour and decision-making (Cloninger, 1994; Lysack, McNevin, & Dunleavy, 2001; Munro, Bore, & Powis, 2005; Reisz, Boudreaux, & Ozer, 2013), including in regard to:

- career choices (Ackerman & Beier, 2003; Eley, Eley, Bertello, & Rogers-Clark, 2012; Holland, 1997; Jones et al., 2013; Malhi et al., 2011),
- career satisfaction (Richardson, Lounsbury, Bhaskar, Gibson, & Drost, 2009)
- life satisfaction (Cloninger & Zohar, 2011; Josefsson et al., 2011; Magee, Miller, & Heaven, 2013).

A small body of research has begun to investigate personal traits in the medical and nursing workforce, looking for links with successful recruitment and retention (Eley, Eley, Young, & Rogers-Clark, 2011; Eley, Young, & Przybeck, 2009b; Jones et al., 2013). Despite this, personal traits and motivation characteristics of AH professionals, particularly of AH professionals with experience in remote Australia, have received very little research attention in Australia or internationally (Dodd, Siggers, & Wildy, 2009).

To fill this gap, this project proposes an in-depth investigation into the characteristic patterns and features in personal trait and motivation profiles of Australian AH professionals. It has a particular focus on the remote context and includes both novice and experienced AH professionals. The findings will be constructive in enhancing career decisions for individuals and policy directions for employers in relation to recruitment and retention of professionals well-suited to the challenge of the remote Australian health service delivery environment.

The remainder of this chapter will describe the Australian rural and remote context as well as the AH workforce in more detail. It will then provide a brief introduction to the methodology employed in the project and expand on the research question.

1.2 The rural and remote context

Despite its foundation as a rural economy established on agriculture and mineral resources, Australia has increasingly become city- and coastal-based. Over two-thirds of the population of approximately 23.7 million people (Australian Bureau of Statistics, 2015) are congregated in the capital cities, while the eastern seaboard has consistently been one of the fastest population growth areas outside the capital cities (Australian Bureau of Statistics, 2009, 2014). With a very large land mass (7.6 million square kilometres) and population density clustered around the coastline, population decline has occurred in inland rural Australia, and the proportion of the population living in remote areas is only 2.3% (Australian Bureau of Statistics, 2009, 2014).

In everyday use, 'remote' is understood to include the concept of being at some distance from large centres and therefore implies a 'lack of accessibility to services regarded as normal in

metropolitan areas' (Department of Health and Aged Care & National Key Centre for Social Applications of Geographic Information Systems, 2001, p. 3). Australia's arid interior is sparsely populated, with few large urban centres, limited infrastructure and corresponding poor access to services readily available in the more densely populated areas. The map in Figure 1-1 illustrates this by showing the population distribution across the Australian continent, with generally decreasing density inland and with increasing distance from capital cities.

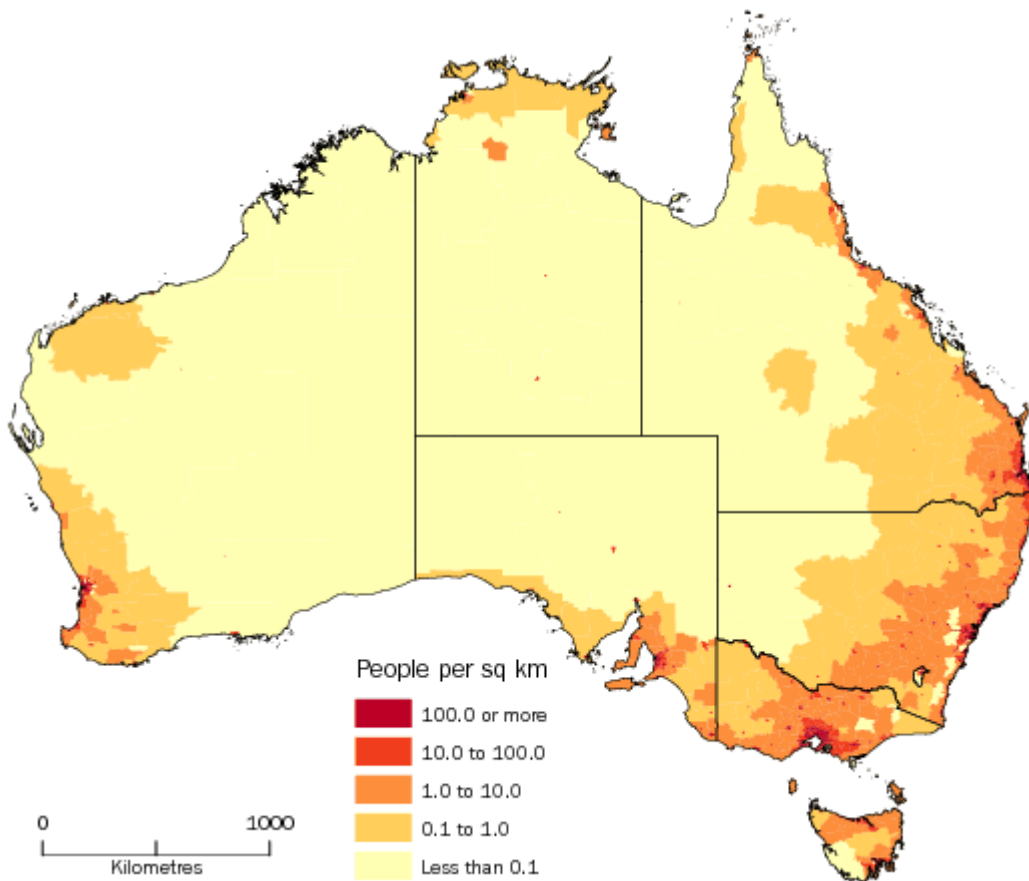


Figure 1-1: Australia's population density, June 2013 (Australian Bureau of Statistics, 2014)

The specific measure of remoteness used in this study is the Australian Standard Geographical Classification-Remoteness Area (ASGC-RA) system (Trewin, 2001). Developed by the Australian Bureau of Statistics, the ASGC-RA is a geographic classification system that allows the level of 'remoteness' experienced by the population living in that region to be quantified. The ASGC-RA, or remoteness calculator, is based on road distance to the nearest urban centre, and thus refers to the accessibility of goods and services (Australian Institute of Health and Welfare, 2004). There are five categories of remoteness within the ASGC-RA classification, as shown in Table 1-1.

Table 1-1: Australian Standard Geographical Classification of Remoteness Areas categories

Category	Description	Example communities
RA1	Major cities of Australia	Adelaide, Newcastle, Ipswich
RA2	Inner regional Australia	Ballarat, Hobart, Stawell, Mt Gambier
RA3	Outer regional Australia	Geraldton, Theodore, Darwin
RA4	Remote Australia	Alice Springs, Broome, Mt Isa
RA5	Very remote Australia	Ceduna, Nhulunbuy, Cobar, Wadeye

Figure 1-2 shows the ASGC-RA classification across Australia. It can be seen that this largely mirrors the population density, with the eastern seaboard having the most RA1 and RA2 areas, i.e. major cities and inner regional areas, and inland Australia generally characterised by RA4 and RA5 areas, i.e. remote and very remote regions.

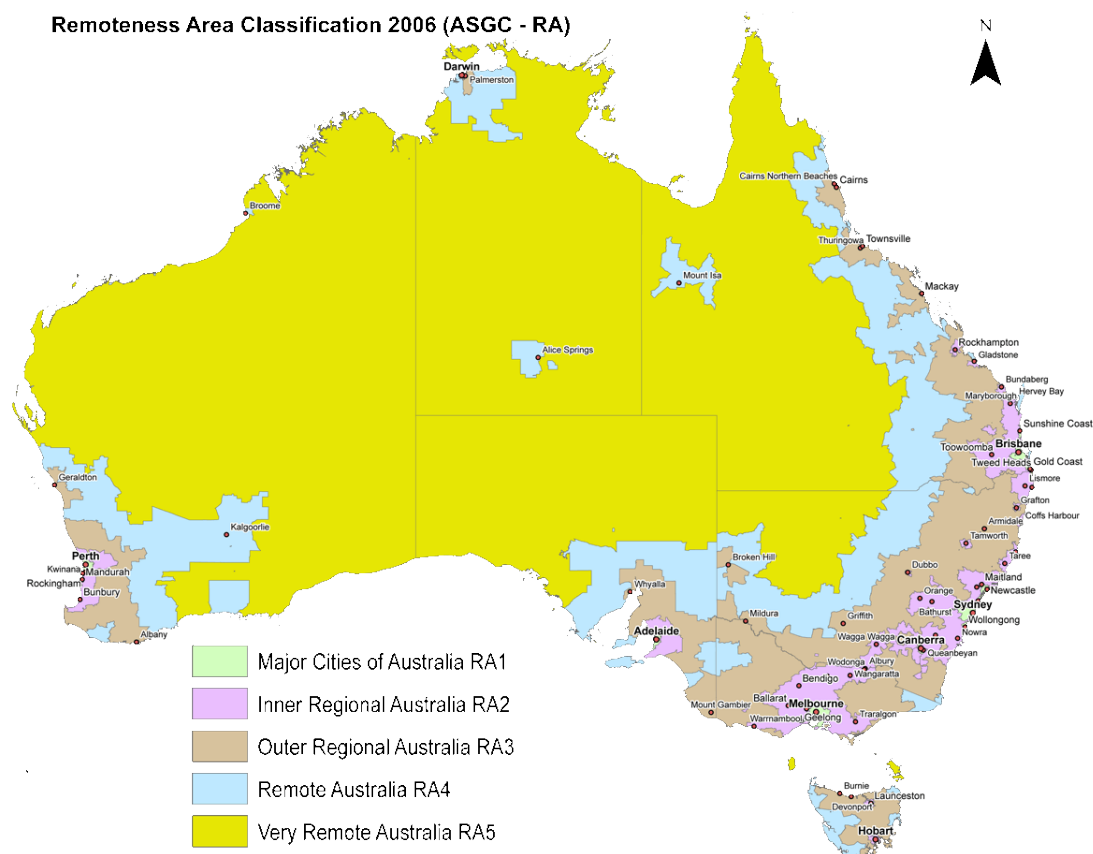


Figure 1-2: Remoteness Area classification of Australia as measured by ASGC-RA (Department of Health and Ageing, 2009)

Remote (RA4) and very remote (RA5) are the areas of interest in this study. Further information about how the classification is applied in this study will be provided later in this chapter.

1.3 The relationship between remoteness and healthcare access

Globally, there is concern about recruiting and retaining the healthcare workforce in remote and rural areas (World Health Organization, 2010) because of the relationship between increasing remoteness and poorer health outcomes (Australian Institute of Health and Welfare, 2008, 2014; Humphreys, Wakerman, Kuipers, et al., 2009; Joyce & Wolfe, 2005; Mason, 2013; Productivity Commission, 2005; Turrell, Stanley, de Looper, & Oldenburg, 2006). People in remote and rural areas have a higher burden of disease and poorer access to healthcare compared with people in urban areas (Australian Institute of Health and Welfare, 2009).

The Australian Institute of Health and Welfare, the premier national government agency collecting and compiling statistics that inform health policy decisions in Australia, in their recent biennial report, 'Australia's Health' (Australian Institute of Health and Welfare, 2014), pointed out that the mortality rates for all cancers combined is highest in remote, very remote areas, and outer regional areas (RA3). It also noted that residents in remote areas have a higher burden of stroke compared with people in major cities (RA1); that hospitalisation rates for end-stage kidney disease were associated with increasing remoteness; and that accessing dialysis treatment often required relocation to larger centres from remote areas. Other conditions, such as dental conditions requiring hospitalisation, occur at greater rates in very remote areas. Age-standardised death rates increased with increasing remoteness. Overall, 'Australians in regional and remote areas tend to have shorter lives and higher rates of disease and injury than people in major cities' (Australian Institute of Health and Welfare, 2014, p. 186).

The interactions between health outcomes and remoteness are complex and include Indigeneity, social factors including economic, educational and employment disadvantage, access to goods and services, and health service gaps (Australian Institute of Health and Welfare, 2014). For example, remote areas have a higher proportion of Aboriginal and Torres Strait Islander Australians who, despite significant reductions in burden of disease, still experience poorer health outcomes as a result of chronic conditions such as end-stage renal disease, and injury-related hospitalisation and death (Australian Institute of Health and Welfare, 2013a; Pink & Allbon, 2008). An alternative example is the increased risks of occupation-related injury in remote areas due to employment in farming, mining and transport (Australian Institute of Health and Welfare, 2014).

This thesis focusses particularly on the health workforce in remote areas. Despite increases in the numbers of healthcare professionals being trained, and an overall growth in the rural and remote workforce, differences which disadvantage rural and remote residents remain (Health Workforce Australia, 2014). For example, there are 394 medical practitioners per 100,000 population in major cities (e.g. Sydney and Adelaide), compared with 222 per 100,000 in remote and very remote Australia (e.g. Alice Springs and Ceduna). Similarly, the distribution of psychologists and podiatrists is approximately three times higher in major cities than in rural and remote areas, while

for pharmacists and physiotherapists the distribution is twice as great (Health Workforce Australia, 2014). These statistics demonstrate the existing maldistribution of the workforce, with regional areas experiencing 'more difficulty filling vacancies than their metropolitan counterparts for most health professions' (Department of Employment, 2014, p. 2). *In situ* healthcare, taken for granted in metropolitan areas, is limited in remote Australia (Australian Government Department of Health and Ageing, 2008; Zhao, Thomas, Guthridge, & Wakerman, 2014).

The reasons why professionals come to remote and rural areas, what makes them stay and why they leave, have been the subject of discussion and debate in both the academic literature and government policy (Australian Health Workforce Advisory Committee, 2006; Best, 2000; Dussault & Franceschini, 2006; Fitzgerald, Hudson, & Hornsby, 2000; Humphreys, Wakerman, Kuipers, et al., 2009; Humphreys, Wakerman, Pashen, et al., 2009; Huntley, 1991; Laurence, Williamson, Sumner, & Fleming, 2010; O'Kane & Curry, 2003; Tooke, 2010; World Health Organization, 2010). As pointed out at the beginning of the chapter, despite the raft of available knowledge and solutions, recruitment and retention issues for health professionals in rural and remote Australia persist.

1.4 The allied health professional workforce

The health workforce is comprised of three main occupational groups: medicine, nursing and AH. Nursing is the largest, while AH, a collective term for a number of diverse, individual professions, is the second largest group. Inclusion or exclusion of a profession under the label, 'allied health', has often been contested, particularly when associated with funding provisions, scholarships, grants or memberships.

Recent Australian health workforce reform (Health Workforce Australia, 2011) included the AH workforce and the individual AH professions in strategic planning and projects but did not attempt to create a new definition of AH. The lack of an agreed national or international definition of AH has frequently resulted in definition by exclusion, i.e. those health professions that are non-medical and non-nursing (Australian Health Workforce Advisory Committee, 2006; Boyce, 2006; Fitzgerald et al., 2000; Turnbull et al., 2009). It is important to note that unlike some international contexts, in Australia, nurse specialists such as diabetes educators are usually not considered AH professionals (Boyce, 2001).

The inclusion approach to defining AH simply lists the eligible professions. Examples of this include the Nursing and Allied Health Scholarship and Support Scheme (2015) and the Australian Institute of Health and Welfare (2013b). Even in a narrow listing approach to inclusion, there is usually agreement about which professions are seen as core. These would most commonly be physiotherapy, occupational therapy, speech pathology, social work, psychology and dietetics (Boyce, 2006; Lowe et al., 2007). Interestingly, core disciplines from a professional perspective do

not necessarily align with public safety considerations taken by regulatory bodies. So, for example, neither speech pathology nor dietetics was invited to become registered professions under the recently introduced National Accreditation and Registration Scheme (Australian Health Practitioner Regulation Agency, 2015).

Applying agreed criteria is an alternative approach to defining AH. For example, Turnbull et al (2009) reviewed existing definitions of AH and developed a model that accounted for core tasks, related professions and career pathways. Services for Australian Rural and Remote Allied Health (SARRAH), the peak body 'representing and influencing reform in rural and remote allied health' (Services for Australian Rural and Remote Allied Health, 2014c), also used criteria in defining AH (Lowe et al., 2007). The SARRAH constitution uses the work of Lowe et al (2007) to recognise AH professionals as:

Tertiary qualified health professionals who apply their skills to diagnose, restore and maintain optimal physical, sensory, psychological, cognitive and social function. They are aligned to each other and their clients. (Services for Australian Rural and Remote Allied Health, 2014b)

In practice, SARRAH advocates for and supports the rural and remote AH workforce through many activities, utilising a Board and an Advisory Committee. At the time of writing the Advisory Committee was comprised of representatives from the professions of podiatry, oral health, speech pathology, exercise and sports science, medical imaging, dietetics, psychology, physiotherapy, pharmacy, optometry and social work. In addition, the organisation's website lists the following professions as eligible: audiology, chiropractic, dentistry, diabetes education, genetic counselling, health promotion, occupational therapy, orthoptics, osteopathy, paramedics, prosthetics and orthotics (Services for Australian Rural and Remote Allied Health, 2014a). This second list illustrates the greyness and lack of agreement in defining AH, whereby professions such as diabetes education, which originated in nursing, can be considered as part of the AH workforce.

Data availability on the Australian AH workforce has long been recognised as problematic (Lowe, 2007; Mason, 2013; Russell et al., 2013). There is no national minimum dataset routinely collected for either a core or broader group of AH professionals (Lowe, 2007). It is not only the spectrum of diverse professions and variation in labelling that has contributed to this issue. Data collected using traditional means such as national census data, professional registration or membership of an association are incomplete. For example, despite the introduction of the National Registration and Accreditation Scheme in 2010, not all health professions are registered (Australian Health Practitioner Regulation Agency, 2015; Mason, 2013). Besides nursing, midwifery and medicine, the Australian Health Practitioner Regulation Agency (AHPRA) requires registration for only twelve other health professions: Aboriginal and Torres Strait Islander health practitioners, Chinese medicine, chiropractic, dentistry, medical radiation, occupational therapy, optometry, osteopathy, pharmacy, physiotherapy, podiatry and psychology (Australian Health Practitioner Regulation

Agency, 2015). Professions that are self-regulated (e.g. speech pathology) generally cannot mandate membership in their professional association, and therefore professional association data are also incomplete.

Historically, the Australian Institute of Health and Welfare produced workforce reports on selected professions (see Lowe, 2007 for a complete description), based mainly on data obtained through professional associations. The most recent report utilised AHPRA data and therefore reported only the registered allied health professions (Australian Institute of Health and Welfare, 2013b). Additionally, the four-yearly national census undertaken by the Australian Bureau of Statistics (ABS) provides some AH data but has limitations because of the self-report nature of the census and ambiguity due to differences in results obtained, depending on whether highest educational level or profession of current employment is used to extract data about specific AH professional groups. Recent work by both Health Workforce Australia and the Australian Institute of Health and Welfare to aggregate data from multiple sources, including AHPRA and ABS, has produced the most current picture of the AH health workforce (Australian Institute of Health and Welfare, 2013b; Health Workforce Australia, 2014). Despite the limitations of these data, they will now be presented, together with other literature, to argue that there are differences in distribution of the AH workforce between major cities and rural and remote Australia, and that these differences need to be addressed in order to improve health equality for Australians.

Table 1-2 presents an aggregated picture of the AH workforce, with a particular emphasis on its distribution across Australia.

Table 1-2: Distribution of allied health professionals across the remoteness areas of Australia

Profession	Number employed ^a	Number (reporting as employed) per 100,000 population			Female %	Median age group (years)	Aboriginal or Torres Strait Islander (n)
		RA1 ^d	RA4 ^d	RA5 ^d			
Registered Aboriginal and Torres Strait Islander Health practitioner ^b	265	-	29.7 (across RA4 and RA5)		74.3	40-44	265
Audiologist ^c	1,489	-	-	-	77.6	35-39	-
Dietitian ^c	3,707	14.2	8.9	4.4	94.6	30-34	8
Imaging (medical radiation practitioner) ^b	7,806	49.2	13.3 (across RA4 and RA5)		66.7	35-39	23
Medical laboratory scientist/technician ^b	15846	-	-	-	78.4	35-39	-
Occupational therapist ^b	9249	48.4	16.7 (across RA4 and RA5)		91.9	30-34	21
Pharmacist ^c	19,934	99.5	50.5	15.7	59.6	30-34	33
Physiotherapist ^c	15929	80.5	41.0	16.2	69.3	35-39	71
Podiatrist ^c	2802	13.6	6.0	1.5	61.1	35-39	3
Psychologist ^c	18603	94.7	38.1	11.8	77.9	40-44	92
Social worker ^c	16916	-	-	-	83.2	40-44	-
Speech pathologist ^c	5295	25.9	12.7	5.9	97.5	30-34	11

^a Sourced from Health Workforce by Numbers 2014 (Health Workforce Australia, 2014) which used 2011 ABS national census data

^b Sourced from Allied Health Workforce Report 2013 (Australian Institute of Health and Welfare, 2013b) which warned of incomplete data, with some state statistics unavailable, and audiologists and social workers not included

^c Sourced from Health Workforce Australia's Health Workforce Series 2014 Professions in Focus

^d Australian Standard Geographical Classification – Remoteness Area: RA1 = Major city; RA4 = Remote; RA5 = Very remote

Note 1: Variations in employer obligations to employ registered Aboriginal Health Workers means data may be under-reported (Australian Institute of Health and Welfare, 2013b)

Note 2: Blank cells mean data were not available

Despite a complicated and imperfect data collection process, the information in Table 1-2 demonstrates a number of characteristics of the AH workforce. It highlights the strongly female-dominated nature of the professions. While there has been discussion that the AH workforce is ageing (Lowe et al., 2010), it is also argued that new graduates reflect their generational values and tend to be mobile, working to gain initial experience and then leaving their professions for a time to travel or care for family (Dodd et al., 2009; Millsteed, 2001; Mulcahy, Jones, Strauss, & Cooper, 2010). Some professions report concern about overall attrition rates prior to retirement (McLaughlin, Lincoln, & Adamson, 2008; Mulcahy et al., 2010). Although not shown in the table, the majority of the AH workforce are Australian-trained (Australian Institute of Health and Welfare, 2013b; Keane, Smith, Lincoln, & Fisher, 2011).

The table also clearly shows the inequitable AH workforce supply in remote Australia. Residents in remote and very remote areas (RA4 and RA5) have considerable disadvantage in accessing AH services compared with those in major cities (RA1). The increasing use of a fly in/fly out health workforce may offset some of this disadvantage. However, evidence for the effectiveness of the fly in/fly out model is mixed (Wakerman, Curry, & McEldowney, 2012).

The serious under-representation of Indigenous people in the AH professions is problematic, for two reasons: firstly, because it does not reflect the proportion of the population that is Indigenous; and secondly, because the residents in many remote areas are predominantly Indigenous, and yet cannot choose services provided by health professionals from their own culture.

Finally, the literature shows that Australian AH professionals are 78% more likely to leave employment in remote areas compared with nurses; the 24-month survival probability for remote AH professionals is 0.5, and the direct costs of replacing an AH professional are well over \$20,000 (Russell et al., 2013). Australian remote health services have reported 30% annual turnover of AH staff, with newer professionals at a statistically significantly higher risk of leaving than more experienced professionals (Chisholm et al., 2011). These findings add weight to the imperative to develop new information to improve recruitment and retention of AH professionals in remote areas.

1.5 Summarising the facts and introducing the research question

Australia has vast areas of sparsely populated regions formally referred to as remote (RA4) and very remote (RA5) areas (Trewin, 2001). While not unique to Australia, recruitment and retention of AH professionals to remote areas have been demonstrated to be problematic (Australian Health Workforce Advisory Committee, 2006; Dussault & Franceschini, 2006; Health Workforce Australia, 2014; Wakerman et al., 2008). Maldistribution of the health workforce has been identified, with urban

populations having greater access to healthcare, including to AH professionals, than populations in more remote areas (Australian Institute of Health and Welfare, 2010b). Increasing remoteness has been consistently associated with increasingly higher population-to-professional ratios (Health Workforce Australia, 2014) and higher burden of disease (Pink & Allbon, 2008). While employers and government policy have instituted programs to improve recruitment and retention of AH professionals in rural and remote Australia, workforce maldistribution persists (Department of Employment, 2014; Humphreys, Wakerman, Kuipers, et al., 2009).

There is a large body of literature that discusses recruitment and retention problems in the medical and nursing workforce, and the understandings developed from these can assist to inform the problem for AH professions. However, there are important differences between the workforces that make direct translation of specific research findings inappropriate. The nursing workforce is large in comparison with the AH workforce, with fewer problems with workforce maldistribution (Smith, 2004). Medicine has a lengthy and supported training pathway, a large proportion of international medical graduates working in remote and rural areas, and government incentives for doctors to work rurally (Humphreys, Wakerman, Pashen, et al., 2009). Both workforces are very different from AH. Therefore, it is crucial to establish a body of evidence directly related to AH professionals.

Recent work in medicine and nursing has sought to identify measurable personality characteristics that are predictive of professionals who 'thrive' rather than 'survive' in remote practice (Eley et al., 2012; Eley et al., 2009b; Eley, Young, & Shrapnel, 2008; Jones et al., 2013). A similar approach aiming to understand the personal and motivational characteristics of the remote AH professional workforce has not been attempted (Dodd et al., 2009). Thus, this research applies a new approach to addressing the challenges of recruitment and retention in rural and remote practice by investigating the personal trait and motivation profiles of AH professionals.

The study will use a mixed methods approach comprising two strands of data collection. The first strand will comprise a quantitative investigation of the personal traits (temperament and character) of novice and experienced AH professionals using a validated personality measure, the Temperament and Character Inventory (Cloninger, Przybeck, Svrakic, & Wetzell, 1994). It will describe the traits found in the sample, compare them with published trait levels for adult populations and seek to identify those traits associated with remote work experience, as well as with individual professions and professional groupings, i.e. professions that are more technique-oriented than person-oriented.

The second strand will investigate personality from the perspective of Personal Construct Theory (Butt & Burr, 2004; Kelly, 1955a) and apply its unique technique, the repertory grid interview (Kelly, 1955a; Winter, 2013), to uncover the construing, or perceptions, of AH professionals about working

successfully in remote areas. Both quantitative and qualitative findings will be presented from the repertory grid results (Grice, 2002; Jankowicz, 2004).

The overarching aim of this work is to discover whether personality and motivational traits are associated with successful recruitment and conducive to retention of AH professionals in remote workplaces. Primary to this aim is a thorough understanding and identification of the myriad of constructs which characterise AH professionals, in particular those who are attracted to and successful in the rural remote context, compared with those with no experience of, or empathy with, the remote Australian context.

It needs to be noted that any individual's profile will be the result of an interplay between the environment, hereditary factors, personal values and attributes, and background educational and personal experiences. As the result of a new approach to characterising the workforce, the findings may be useful in enhancing career decisions and subsequently the recruitment and retention of professionals well-suited to the challenges of remote environments. Additionally, the findings will have direct policy application to enhancing recruitment and retention outcomes.

1.6 The structure of this thesis

This introduction has provided a foundation outlining the gaps in knowledge and the research question of the thesis. Chapter 2 will review the literature on personality and motivation, and describe the methodology to be used. Chapter 3 will present and justify the research design and describe the methodology applied in Strand 1 (quantitative data) and Strand 2 (repertory grid interviews resulting in both qualitative and quantitative data).

A number of chapters containing the results of the study will follow Chapter 3. Chapter 4 presents Strand 1 results in the form of two published, peer-reviewed journal articles. The results for Strand 2 are presented in three chapters: a short introductory chapter (Chapter 5) outlining the sample characteristics; the results of qualitative data analysis of the constructs obtained from the repertory grid interviews (Chapter 6); and a chapter presenting the quantitative analysis of elements obtained from the repertory grid interviews (Chapter 7).

In keeping with a mixed methods design, Chapter 8 provides a synthesis of Strand 1 and 2 data. The final chapter, Chapter 9, is a discussion which will highlight the policy recommendations derived from the research findings.

Included in this thesis are three peer-reviewed, published journal articles. One is included in the literature review (Chapter 2) and two are included in Chapter 4, providing the Strand 1 results. In

keeping with The University of Queensland requirements, these chapters are presented in the standard format. Unless necessary for the reader's benefit, or for the final synthesis, points made in the introduction and discussion of each journal article will not be repeated in other chapters.

Chapter 2

Review of the Literature in Relation to Motivation and Personality

2 Review of the Literature in Relation to Motivation and Personality

The research question in this thesis highlights personality and motivation as potential untapped information that may strengthen recruitment and retention of allied health (AH) professionals in remote areas. Having established in the introduction the workforce shortage and maldistribution and the influence these have on the health of residents in remote areas, this chapter will now position the research question within the existing literature.

The chapter commences with a published comprehensive review prepared as part of this PhD, of the known literature on the factors or incentives that motivate AH professionals working in remote areas (Campbell, McAllister, & Eley, 2012). These factors can be thought of as potentially influencing recruitment and length of retention in remote areas (Chisholm et al., 2011; Humphreys, Wakerman, Pashen, et al., 2009; Keane, Lincoln, & Smith, 2012). These factors include extrinsic incentives such as access to professional development, supervision, career opportunities, rural lifestyle, generalist caseload; and intrinsic incentives such as challenge, autonomy and community connections. The notion of extrinsic and intrinsic motivation (Herzberg, 1987; Herzberg et al., 1959) is considered a classic work motivation model which accounted for 'complex interactions between internal and external factors [in the individual, and the workplace] and explored the circumstances in which individuals respond to different types of internal and external stimuli' (Knoop, 1994, p. 930). Despite methodological criticisms, the theory continues to be replicated and expanded in research, as well as taught in contemporary business courses (Bassett-Jones & Lloyd, 2005).

The aim of the review was to delineate the literature describing the influential motivation incentives for AH professional working the rural and remote areas of developed countries. In particular, the focus was on understanding how the incentives might influence for or against remote work, and thus potentially provide a framework that might guide policy addressing the AH workforce maldistribution. The review paper in the next section describes the search strategy, however the criteria for exclusion of papers were as follows:

- Medicine, nursing or other non-AH professional health worker
- Not rural and remote
- Clinical interventions or patient focussed rather than workforce focussed
- Located in a non-western country
- Theoretical or opinion piece, not research

The final 35 papers included in the review were read in full and outcomes recorded according to the following protocol: study design; sample size, location and profession (including number of participants

or response rate); study outcome; and main findings relevant to motivation incentives. Analysis of the main findings used Herzberg's intrinsic and extrinsic incentive theory as noted above and described in more detail in the paper to follow.

No evidence of significant change in the recruitment and retention incentives impacting on AH professionals has been noted in the literature since this review was published. Keane et al. (2012) echoed the findings of the review when reporting push factors to leave rural areas and pull factors to be recruited or retained. Winn, Chisholm, and Hummelbrunner (2014) also confirmed previously-known information where retention was associated with lifestyle factors and professional networking (extrinsic incentives) and job satisfaction (intrinsic incentive).

New factors were reported by Lincoln et al. (2013) in a study of the rural disability workforce. These findings may be a result of her specific focus on the disability sector, but may also be due to differences related to the inclusion of non-AH professional staff in the study. The differences particularly related to human resource processes, and may generally be considered extrinsic (dis)incentives. These included inefficient recruitment, which produced cross-sector competition and failed to capitalise on opportunities, as well as the use of casual contracts, which reduced the attractiveness of positions. Long waiting lists and bureaucratic service provision models (extrinsic (dis)incentives), over which staff had no autonomy, produced embarrassment and frustration (intrinsic (dis)incentive). These findings support the findings of the review (Campbell et al., 2012) regarding the imbalance of incentives with a negative effect compared with those with a positive effect.

Despite being peer-reviewed and published in 2012, the review on motivation is included here in the standard thesis format. The references are included in the main reference list at the end of the entire thesis.

2.1 Journal article 1: The influence of motivation in recruitment and retention of rural and remote Allied Health professionals – A literature review

Citation

Campbell, N., McAllister, L., & Eley, D. S. (2012). The influence of motivation in recruitment and retention of rural and remote allied health professionals: A literature review. *Rural and Remote Health, 12*(2), 1900. (Online) 2012. Available: <http://www.rrh.org.au>

2.1.1 Abstract

Background

Recruitment and retention of allied health (AH) professionals to remote and rural Australia is challenging, and correlates with poorer health status of the residents in remote and rural areas. While much has been written about the recruitment and retention problem, this study took a new approach by reviewing the literature describing the motivation of AH professionals to work in remote and rural areas and then analysing the findings from the perspective of motivation theory using Herzberg's extrinsic and intrinsic classification. Intrinsic motivation incentives are known to contribute to job satisfaction and come from within the individual, for example, the pleasure derived from autonomy or challenge at work. In contrast, extrinsic motivation incentives are provided by the job and include such factors as salary and professional development provisions. Extrinsic incentives are important because they prevent job dissatisfaction. Job satisfaction has been shown to be linked with increased retention.

Method

Thirty-five articles, including 26 Australian, met the inclusion criteria. The key findings related to motivation from each article are outlined and the results classified into the extrinsic-intrinsic framework. The incentives are then further analysed as having a positive or a negative influence.

Results

In total, 38 different incentives were described a total of 246 times. Of the total, almost half (n=115) comprised extrinsic incentives with a negative influence; poor access to professional development, professional isolation and insufficient supervision were the most frequently reported. Rural lifestyle and diverse caseloads were the most frequently mentioned positive extrinsic incentives, while autonomy and community connectedness were the most cited positive intrinsic incentives. Negative intrinsic incentives were mentioned least frequently (n=18). However, of these, feeling overwhelmed and that your work was not valued by the community were most commonly reported.

Conclusions

The results demonstrate the significant burden of extrinsic incentives with a negative influence that are perceived by AH professionals in remote and rural areas. The high turnover rate of AH professionals in remote and rural areas is likely to be, in part, due to the job dissatisfaction from these disincentives.

More positive intrinsic incentives were reported than negative. This suggests the potential for intrinsic incentives, known to contribute to job satisfaction, mediating the extrinsic disincentives.

The policy implications of this work include the importance of addressing the extrinsic disincentives. Simultaneously, the existing intrinsic incentives, known to contribute to job satisfaction, need to be nurtured and developed. Organisations that implement strategies to enhance both extrinsic and intrinsic motivation incentives are more likely to successfully address their AH professional workforce shortage.

Key words

Allied health professional, Australia, extrinsic, intrinsic, job satisfaction, motivation, job satisfaction, remote and rural workforce

2.1.2 Background

The recruitment and retention of allied health (AH) professionals to remote and rural areas in Australia, and elsewhere in the world, has long been problematic (Australian Health Workforce Advisory Committee, 2006; Dussault & Franceschini, 2006; Wakerman et al., 2008). Maldistribution of the health workforce has been widely acknowledged, with urban populations having greatest access to healthcare, including that provided by AH professionals. Increasing remoteness correlates with increasing workforce shortages and higher burden of disease (Allen & Leon, 2008; Australian Health Workforce Advisory Committee, 2006; Australian Institute of Health and Welfare, 2008; Best, 2000; Humphreys, Wakerman, Pashen, et al., 2009). The reasons professionals come, what makes them stay and the reasons why they leave remote and rural areas, have been the subject of discussion and debate in both the academic literature and government policy (Australian Health Workforce Advisory Committee, 2006; Best, 2000; Dussault & Franceschini, 2006; Fitzgerald et al., 2000; Humphreys, Wakerman, Kuipers, et al., 2009; Humphreys, Wakerman, Pashen, et al., 2009; Huntley, 1991; Lenthall et al., 2011; O'Kane & Curry, 2003).

This review will analyse the literature describing AH professionals' motivation to work or not work in remote and rural areas. Motivation is defined as the reasons, beyond personal traits, that drive an individual towards a goal (Robbins et al., 2010). In this paper the 'individual' is an AH professional and the 'goal' is working in remote or rural workplaces. The aims of this review were to address two research questions; (i) what does the literature describe as the incentives that motivate AH professionals to work in remote and rural areas, and (ii) are these incentives classifiable into a framework useful in addressing the workforce maldistribution? An analysis of this type can assist in policy design and organisational strategies which focus on the recruitment and retention problems.

This analysis is underpinned by Frederick Herzberg's seminal framework of motivation at work, which classified worker motivation into two types, intrinsic and extrinsic (Herzberg et al., 1959). Herzberg's research provided insights into motivation that are integral to current understandings of job satisfaction, which is associated with workforce retention (Griffeth, Hom, & Gaertner, 2000; Kamien, 1998).

Extrinsic motivation incentives are provided by the workplace. Examples include salary, work status and security, leave allowances and professional development. These types of incentives have been termed 'hygiene factors' because they prevent job dissatisfaction (Herzberg et al., 1959, p. 113), rather than providing job satisfaction. Perceived restriction of extrinsic incentives (for example, inadequate salary for responsibilities expected) has been linked to reduced job satisfaction (Herzberg et al., 1959; Lyons, Lapin, & Young, 2003; Randolph, 2005).

Intrinsic motivation incentives are inherent in work, the pleasure derived from the work itself (Deci et al., 1999). They make a person 'feel good' about their work and their performance of it. These incentives provide a reason above and beyond the extrinsic incentives to engage in the work and contribute directly to job satisfaction (Herzberg et al., 1959). Examples include challenge, autonomy and perceived significance of the work.

Studies of health professionals, including nursing, medicine and AH, have confirmed the relative importance of intrinsic incentives over extrinsic incentives in providing job satisfaction (Decker, Harris-Kojetin, & Bercovitz, 2009; Kontodimopoulos, Paleologou, & Niakas, 2009; Lambrou, Kontodimopoulos, & Niakas, 2010; Lyons et al., 2003; Martin, Champlin, & Streetman, 1997; Randolph, 2005). For example, Randolph in a study of 328 rehabilitation professionals in North America concluded that extrinsic incentives were weaker in significance for predicting job satisfaction and intent to stay compared with intrinsic incentives such as professional growth and a work environment in line with personal values (Randolph, 2005). Likewise, a study by Lyons of 787 American healthcare professionals found that three out of four of the top factors for predicting job satisfaction were intrinsic incentives including 'worthwhile accomplishment and opportunities for growth and recognition' (Lyons et al., 2003). Kamien, in a longitudinal study of Australian rural medical workforce, defined three incentives contributing to professional job satisfaction: variety in work, autonomy of practice and the feeling of doing an important job (Kamien, 1998).

For any individual at any point in time, there is a dynamic balance of extrinsic and intrinsic incentives. Unique environmental, professional and personal factors interact with motivation to impact job satisfaction, and recruitment and retention outcomes (Bandura, 1977; Funder, 2006; Harding, Whitehead, Aslani, & Chen, 2006; Humphreys, Wakerman, Pashen, et al., 2009; Manahan, Hardy, & MacLeod, 2009; McLaughlin et al., 2008; Solomon, Salvatori, & Berry, 2001). Age and experience interplay with background and overall goals. Younger professionals rank career opportunities (extrinsic) more highly than older professionals (Millsted, 2001; Zingeser, 2004). The intrinsic reward of job challenge and autonomy can offset the extrinsic disincentive of personal and professional isolation associated with remote and rural work (Bent, 1999; Millsted, 2001). Additionally, factors that operate as incentives for some may be viewed as disincentives by others (e.g. rural lifestyle) (Heaney, Tolhurst, & Baines, 2004).

The factors that motivate AH professionals to work in remote and rural areas are of considerable interest to both service providers and policy-makers because recruitment and retention of allied health professionals to these areas is problematic (Humphreys, Wakerman, Kuipers, et al., 2009). One model showed that the risk of an AHP leaving a remote or rural position is twice that of a nurse or doctor (Humphreys, Wakerman, Kuipers, et al., 2009). There is a body of descriptive research that has

examined the contributors to recruitment and retention. However, almost no literature has looked at the motivation of remote and rural AH professionals from the perspective of extrinsic and intrinsic motivation. This literature review examined the incentives affecting motivation in AH professionals working in remote and rural areas, offering new approaches to improving recruitment and retention. In particular, it looked for the balance of extrinsic and intrinsic incentives and asked how this new insight can assist in the development of recruitment and retention strategies and practices.

2.1.3 Method

Literature was retrieved for this investigation (October 2010) using the PubMed and CINAHL electronic databases as well as Google Scholar (see Figure 2-1: Search strategy results). Key words included allied health professional/personnel, motivation, job satisfaction, rural, remote, recruitment, retention, workforce, career decision and vocation, in addition to specific AH professional titles (e.g. occupational therapist, audiologist). Variants on professional titles were used where appropriate (e.g. speech pathologist, speech-language pathologist, speech therapist). Snowballing techniques were then applied whereby the reference lists of retrieved publications were searched for other relevant citations. Initial inclusion criteria included Australian-based research studies or systematic reviews published between 1990 and October 2010. However, the search was broadened to include other English-language studies or reviews in developed countries. If studies clearly included AH professionals plus other health professionals, they were included; however, articles specifically focussed only on doctors or nurses were excluded. Studies of AH professional student perception of remote and rural work were included.

A variety of definitions for 'rural' and 'remote' was found in the retrieved literature; so for the purposes of this article, the terms will be used in a common sense fashion to refer to the range of communities beyond major metropolitan areas. Similarly, the term, 'allied health', is one that currently has no agreed definition. However, it is generally understood to be inclusive of health professionals with a tertiary qualification, eligible for registration with a recognised professional body or board, who 'apply their skills to restore optimal physical, sensory, psychological, cognitive and social function' (Lowe et al., 2007, p. 4). This excludes health professionals with a specific medical or nursing qualification. Included AH professions are listed (Table 2-1).

Table 2-1: Allied health professions eligible for inclusion in this paper

Audiology
Nutrition and Dietetics
Exercise Physiology
Occupational therapy
Optometry
Oral health professionals (dentists/hygienists/therapists)
Orthoptics
Orthotics and Prosthetics
Medical Laboratory Science
Medical Radiation Science (Diagnostic and Therapeutic Radiography, Nuclear Medicine, Sonography)
Pharmacy
Physiotherapy
Podiatry
Psychology
Social Work
Speech Pathology

2.1.4 Results

The results of the search are detailed in Figure 2-1. More than 1000 articles were retrieved initially by the first author; however, full papers merited scrutiny by all authors when they met the inclusion criteria. Thirty-five studies (26 Australian, five Canadian, three American and one comparing American and Canadian AH professionals) were included. When the article sought to answer research questions that were broader than the motivation of AH professionals to work in remote and rural areas, only those findings specific to motivation have been included. The methodology in the eligible articles was predominantly survey or focus group studies using a mix of qualitative and quantitative analyses. An overview of each study is provided, as are the major findings related to motivation (Table 2-2).

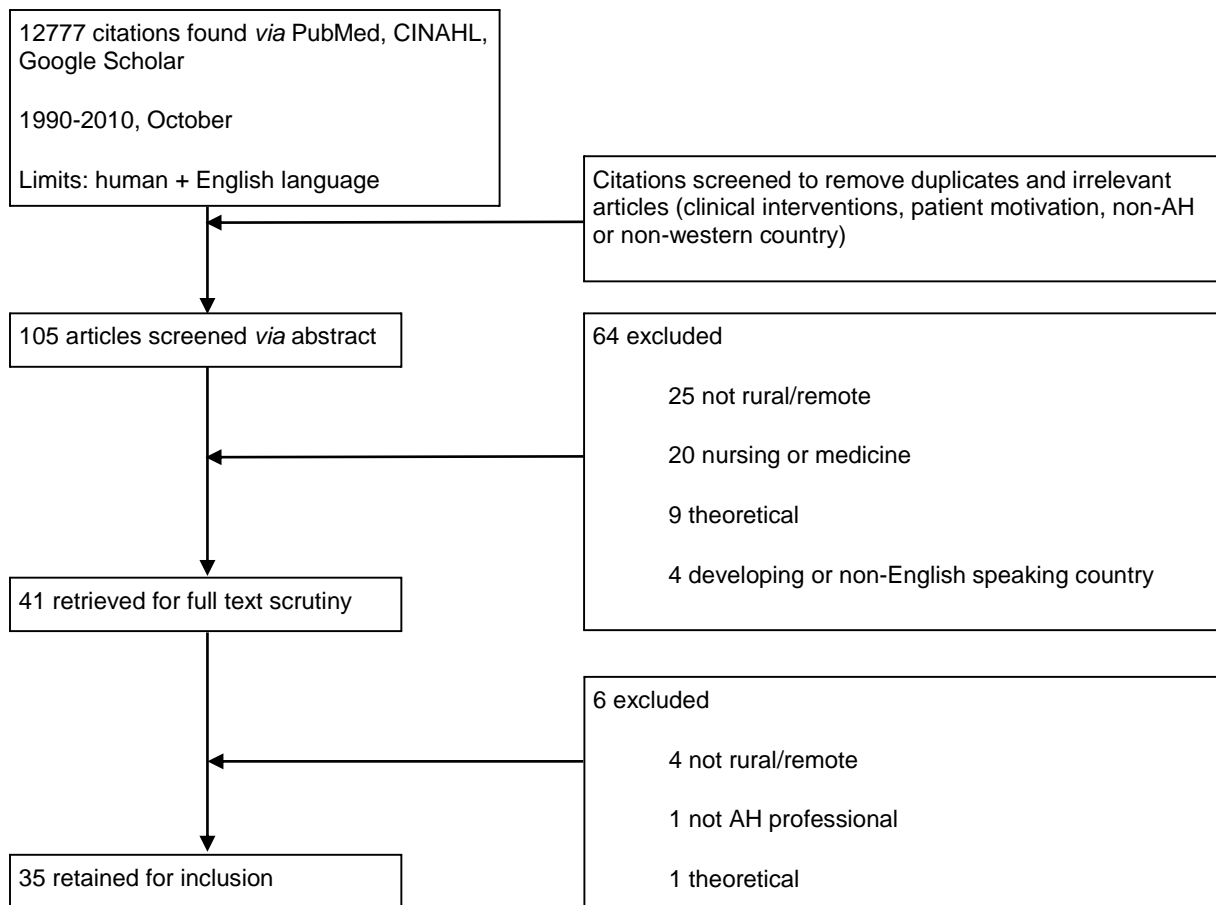


Figure 2-1: Search strategy results

Australian research was most prominent in the retrieved articles. The reasons for this could include that Australia has a historical context rooted in the importance of rural areas. Additionally, it has the third lowest population density in the world (after Namibia and Mongolia, Canada is eighth, USA is 53rd and UK is ranked 161 out of 193 countries counted) (*Countries of the world*, 2010). Yet, as a developed country Australia has the resources to invest in research capacity and infrastructure to address the very significant needs of its remote populations.

All studies reporting demographic characteristics had a predominance of Caucasian female respondents, which reflect the feminised nature of the AH workforce. Additionally, respondents were largely trained in their country of residence, which reflects the current barriers to pathways for recognition of international AH graduates. Some professions, particularly those with small workforces such as podiatry, were only represented in studies that included a range of allied health professions because there are comparatively few of these professionals working in remote areas.

Table 2-2: Main literature findings on motivation of rural and remote allied health professionals

Author (Year)	Study Design	Participants (response rate)	Study Outcome	Main findings relevant to motivation incentives
O'Toole and Schoo (2010)	Mixed methods design (self-developed survey)	72 Australian rural private AH professionals [†] (40% response rate)	Explored participant perception in regard to their contribution to rural health system	Private and public sector partnership recommended to address extrinsic incentive challenges
Wielandt and Taylor (2010)	Quantitative survey	59 Canadian rural OTs [¶]	Identified rewards and challenges of rural work	Rewards (intrinsic and extrinsic) identified more frequently; challenges
Humphreys, Wakerman, Kuipers, et al. (2009)	Multi-pronged research (literature review, data collection)	Rural and remote Australian health services (medical, nursing, AH professional, AHW [§])	Developed workforce retention framework for rural and remote health services	Concluded that both intrinsic and extrinsic factors important but extrinsic incentives have potential to reduce turnover
Humphreys, Wakerman, Pashen, et al. (2009)	Literature review	Australian rural and remote health services	Described effectiveness of retention incentives utilised by services	Extrinsic and intrinsic incentives both vital for retention but no one-size-fits-all approach
Manahan et al. (2009)	Qualitative (semi-structured interview)	26 AH professionals in rural and northern Canada	Identified factors that affect motivation for recruitment and retention in rural areas	Both intrinsic and extrinsic factors influential in recruitment and retention
McAuliffe and Barnett (2009)	Literature review		Described student OT perceptions of rural practice	Intrinsic incentives have a positive effect, while extrinsic incentives could be positive or negative
Allan, Crockett, Ball, Alston, and Whittenbury (2007)	Qualitative (in-depth interview and focus group) – grounded theory approach	Six rural Australian pharmacists and five SW [‡] ; and rural AHP focus group	Identified professional and personal factors that influence commitment to rural practice	Both intrinsic and extrinsic incentives found to be influential in retention; intrinsic incentives offset extrinsic disincentives

[†] Allied health professional

[¶] Occupational therapists

[§] Aboriginal Health Worker

[‡] Social workers

Author (Year)	Study Design	Participants (response rate)	Study Outcome	Main findings relevant to motivation incentives
Blood, Cohen, and Blood (2007)	Quantitative	332 (61 rural) American school-based audiologists	Investigated differences in job burnout between audiologists in rural, suburban and urban schools	Rural group more emotionally exhausted and lower on personal accomplishment (intrinsic incentive)
Gillham and Ristevski (2007)	Qualitative (semi-structured interviews)	38 rural Australian AH professionals, 8 students, 7 managers, 18 AH professionals and 10 former AH professionals	Identified recruitment and retention issues for AH professionals in regional health services	Financial (extrinsic) incentives important for recruitment Both extrinsic and intrinsic incentives important for retention
Hall, Garnett, Barnes, and Stevens (2007)	Quantitative (self-developed survey, modified Delphi approach)	71 dental professionals (currently, or recently, working in remote Australia)	Investigated importance of motivation incentives in recruitment, retention and separation	Novelty (intrinsic) and financial reward (extrinsic) important for recruitment but not for long-term retention (counteracted by stressful work environment, extrinsic)
McAuliffe, Chenoweth, and Stehlik (2007)	Mixed methods (self-developed survey with quantitative and qualitative data)	177 final year SW or human services students from seven Australian universities	Described student perception of rural and remote work, specifically barriers and incentives	Extrinsic incentives believed to have positive recruitment influence but seen to be inadequate
Williams, D'Amore, and McMeeken (2007)	Mixed methods (self-developed survey or phone interview)	84 rural Australian PTs [†] (response rate 79%)	Investigated demographic profile, career choice, education and professional needs	Negative extrinsic incentives dominated Intrinsic incentives reported as both positive and negative
Devine (2006)	Qualitative (semi-structured interviews) phenomenological approach	Six Australian rural OTs and 4 academics from an OT training program.	Explored perceptions regarding attraction to, challenges of and skills required in rural practice	Participants generally satisfied with rural work Extrinsic incentives predominantly negative
Harding et al. (2006)	Qualitative methodology: (interviews with a purposive sample)	12 pharmacists in rural Australia	Explored recruitment and retention factors	Positive extrinsic incentives assisted recruitment but outweighed by extrinsic disincentives Intrinsic important for retention

[†] Physiotherapists (North America uses the term Physical therapists)

Author (Year)	Study Design	Participants (response rate)	Study Outcome	Main findings relevant to motivation incentives
Sidell et al. (2006)	Qualitative design (self-developed survey)	117 SWs in rural Pennsylvania, USA (response rate 65%)	Investigated reasons for rural career	Extrinsic incentives positively influenced recruitment but created challenges when absent Intrinsic incentives mostly positive
Stagnitti, Schoo, Dunbar, and Reid (2006)	Quantitative/Qualitative (survey)	138 AHPs in southwest Victoria	Identified professional needs of workforce in relation to retention	Extrinsic factors mostly negative. Intrinsic incentives mostly positive
Kruger and Tennant (2005)	Quantitative/Qualitative (self-developed survey)	90 rural/remote Australian oral health professionals (dentists, therapists and hygienists)	Analysed incentives for recruitment, retention and separation	Lifestyle (extrinsic) most important recruitment influence Extrinsic needs generally not met and became reason for separation
Stagnitti, Schoo, and Dunbar (2005)	Quantitative (self-developed survey with open and closed questions)	138 AH professionals in rural Australia (response rate 37%)	Identified AH professional access and attitudes to continuing professional development	No significance found between continuing professional development (extrinsic incentive) and intention to stay
Denham and Shaddock (2004)	Mixed methods (self-developed survey, focus group, key informants)	39 rural Australian SPs [†] , OTs and PTs working in developmental disability (response rate 67%)	Investigated influences on recruitment and retention	Intrinsic incentives predominantly positive and extrinsic incentives predominantly negative
Heaney et al. (2004)	Qualitative (focus groups with a semi-structured theme approach)	23 dietetic students and new graduate dietitians from an Australian university	Investigated influential factors for novices regarding rural practice	Both extrinsic and intrinsic incentives influenced attitudes
Lonne and Cheers (2004)	Quantitative/Qualitative (Longitudinal design with a self-developed survey)	194 Australian rural SWs	Investigated advantages and disadvantages of rural practice to assist recruitment and retention	Positive extrinsic incentives outweighed by extrinsic disincentives, and affected retention Intrinsic incentives (positive and negative) evident
Steenbergen and Mackenzie (2004)	Qualitative	9 Australian new graduate rural OTs	Identified availability and impact of professional support	Professional support (extrinsic) encouraged independence. Lack of support reduced satisfaction and professional confidence

[†] Speech pathologists (North America uses the term speech-language pathologists)

Author (Year)	Study Design	Participants (response rate)	Study Outcome	Main findings relevant to motivation incentives
Battye and McTaggart (2003)	Qualitative (focus groups, key informants)	Key allied health stakeholders in a remote Australia	Described development of a sustainable remote allied health primary care outreach service	Service planning must include provision of intrinsic and extrinsic incentives
Lee and Mackenzie (2003)	Qualitative (semi-structured interviews)	5 Australian new graduate rural OTs	Explored the rural new graduate experience	Multiple extrinsic and intrinsic incentives attract new graduates to rural (extrinsic frequently lacking; intrinsic valued)
Blood, Ridenour, Thomas, Qualls, and Hammer (2002)	Quantitative (randomised sample)	1207 American school-based SPs (response rate 60.4%)	Investigated job satisfaction including effect of rurality on job satisfaction	Rurality not predictive of satisfaction (76% satisfied); smaller caseload size (extrinsic) predictive of satisfaction
Kaegi, Svitich, Chambers, Bakker, and Schneider (2002)	Quantitative/Qualitative (self-developed survey)	56 Canadian school-based SPs (29 rural)	Compared job satisfaction across work locations	66% of rural group satisfied. Intrinsic incentives provided most satisfaction and extrinsic incentives mostly disincentives (except caseload size inversely related to satisfaction)
Millsteed (2001)	Qualitative (snowballing approach, semi-structured ethnographic interviews and inductive analysis)	10 Australian OTs working in urban with recent rural experience	Identified factors that affect retention	Extrinsic incentives negative in influence with exception of rural lifestyle. Intrinsic incentives mostly positive
Parkin, McMahon, Upfield, Copley, and Hollands (2001)	Program development and evaluation	29 Australian rural and urban AHPs and managers	Described a work experience program linking rural with metropolitan hospital AH professionals	Personal goals and expectations met (intrinsic); skills, support networks and access to resources (extrinsic) gained
Solomon et al. (2001)	Mixed methods (self-developed survey)	129 OTs and PTs in rural Canada (response rate 74%)	Examined perception of recruitment and retention factors	Extrinsic (positive and negative) and (positive) intrinsic incentives influenced recruitment and retention
Fitzgerald et al. (2000)	Mixed methods (survey, focus groups)	Over 1620 AH professionals working in rural and remote Australia.	Investigated support, education and training needs	Incentives with a negative influence dominated findings, with more extrinsic than intrinsic incentives highlighted

Author (Year)	Study Design	Participants (response rate)	Study Outcome	Main findings relevant to motivation incentives
Bent (1999)	Qualitative (semi-structured interviews)	17 Australian remote PTs, OTs and SPs (100% sampling of public sector)	Examined professional environment, work practices, incentives and challenges of remote work	Intrinsic factors valued; extrinsic incentives largely absent and caused dissatisfaction. Very high turnover
Hughes (1998)	Quantitative (self-developed survey)	140 Australian rural and remote dietitians	Identified rural workforce issues and specific incentives and disincentives for rural and remote practice	Job satisfaction high (98%) Intrinsic incentives included responsibility and autonomy Extrinsic incentives largely disincentives
Foster and Bharvey (1996)	Mixed methods design (survey)	87 SPs working in rural Canadian schools in 2 provinces (response rate 67%)	Examined retention priorities	Slight differences between provinces; however, positive intrinsic and extrinsic incentives both important
Beggs and Noh (1991)	Quantitative/Qualitative (self-developed survey)	196 Canadian PTs (Northern Ontario) (response rate 82%)	Established baseline information regarding retention	Perception of career development options (extrinsic) was most significant factor associated with intent to relocate to urban
Huntley (1991)	Mixed methods (grounded theory approach, interviews and self-developed survey)	98 rural AH professional interviews and 158 surveys (response rate 79%)	Established factors important for recruitment, retention and separation	Challenge (intrinsic incentive) was positive for recruitment Negative extrinsic and intrinsic incentives impacted on retention

The specific findings of each article were analysed using Herzberg’s extrinsic and intrinsic classification. The results of this further analysis are shown graphically according to the number of articles reporting each extrinsic incentive (Figure 2-2), and the number of articles reporting each intrinsic incentive (Figure 2-3). The vertical axis in each figure presents the incentives reported in the articles while the horizontal axis shows the number of articles reporting each incentive. Note that the horizontal axis has a positive and negative side depending upon the influence of the incentive. An incentive could create a positive effect by its presence, for example, ‘family nearby’. Conversely, an incentive could create a negative effect by its presence, (e.g. ‘large caseloads’) or by its absence (e.g. ‘lack of work resources’).

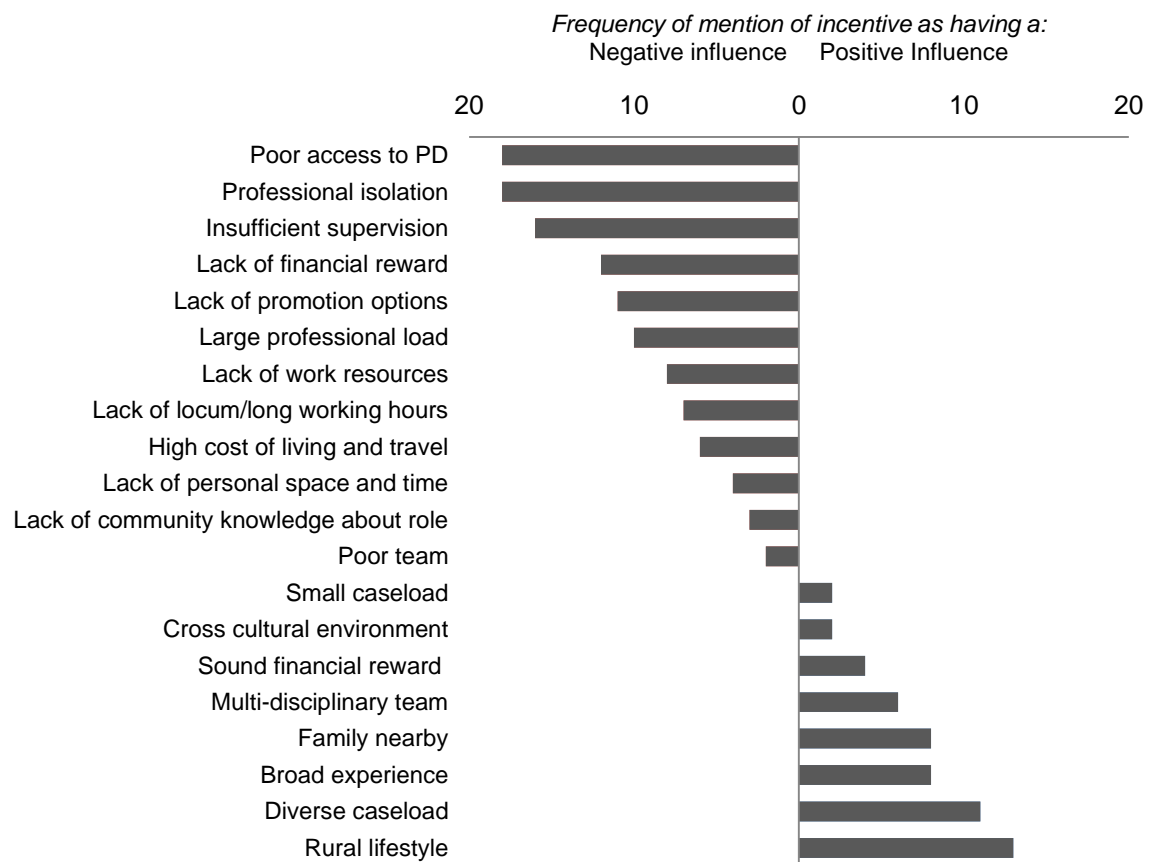


Figure 2-2: Number of articles reporting each extrinsic incentive

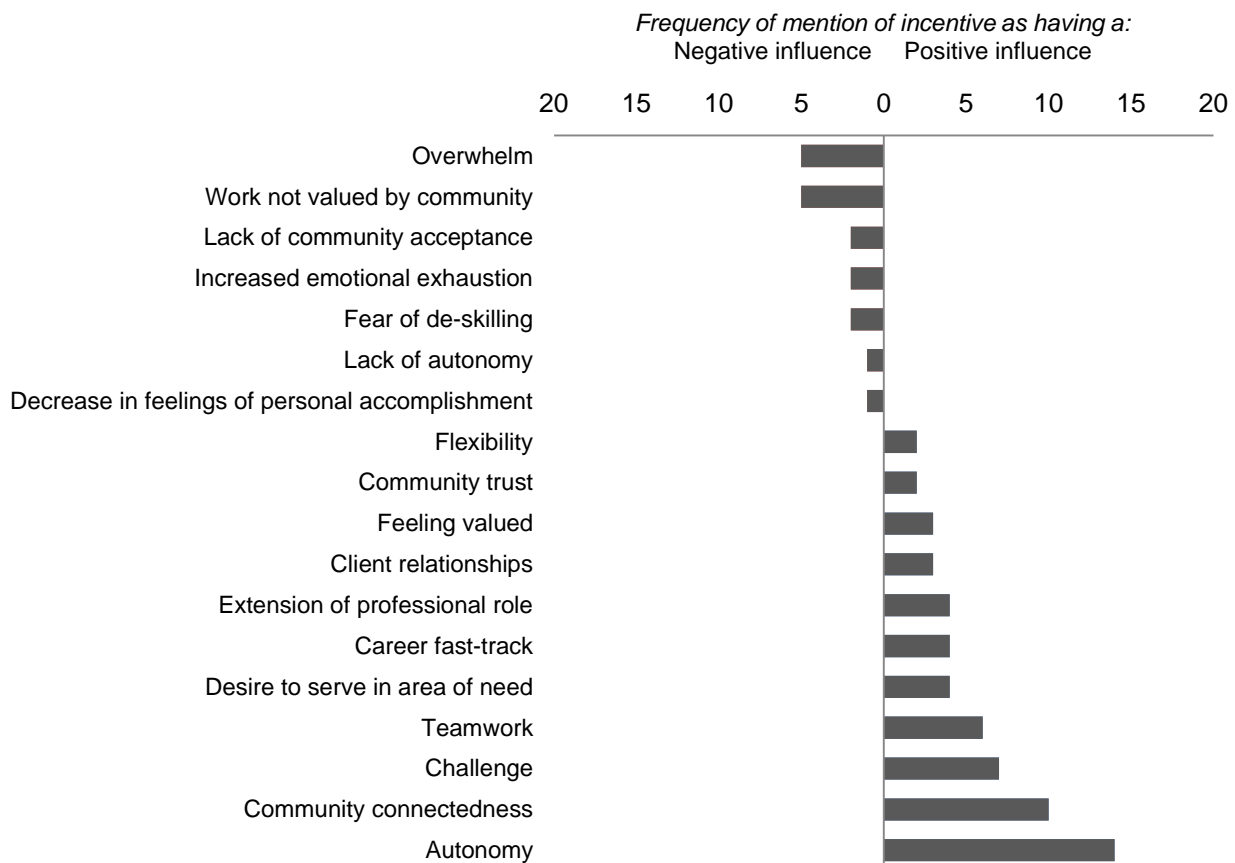


Figure 2-3: Number of articles reporting each intrinsic incentive

Twenty different extrinsic and 18 different intrinsic incentives were mentioned a total of 246 times. Of these, a comparison of Figure 2-2 and Figure 2-3 demonstrates that extrinsic factors with a negative influence (n=115) comprise nearly half of all incentives mentioned, while intrinsic incentives with a negative effect are the least frequently reported (n=18). Incentives that influence positively were reported at similar frequencies for both extrinsic (n=54) and intrinsic (n=59) incentives.

2.1.5 Discussion

Individually, each research article has a small sample size, but combined, the data represent strikingly similar views on remote and rural recruitment and retention incentives from more than 3000 AH professionals. The factors described in the AH literature are consistent with those described in literature relating to nurses, doctors and teachers in underserved areas (Kamien, 1998; Lyons et al., 2003; Paynter, 2004).

2.1.5.1 Extrinsic incentives or hygiene factors

Extrinsic incentives are provided by the job. In the literature reviewed, they included both tangible rewards such as salary and less tangible ones such as 'lack of community understanding of role' (Figure 2-2). The power of extrinsic rewards lies less in what they provide and more in what they

prevent. They act to prevent job dissatisfaction. The absence of adequate extrinsic reward reduces job satisfaction; however, the presence of extrinsic incentives does not increase job satisfaction (Herzberg et al., 1959).

Overall, the results in Figure 2-2 show extrinsic motivation incentives characterised by a negative influence predominated in two ways. More disincentives were reported, and more articles reported each disincentive compared with incentives characterised by a positive influence. Herzberg's hygiene theory, where lack of extrinsic reward reduces job satisfaction, flags the possibility that AH professionals who work in remote and rural areas are likely to have reduced job satisfaction with correspondingly increased rates of turnover. This is supported by authors who demonstrated increased rate of turnover for AH professionals in remote areas compared with other health professionals in remote areas (Bent, 1999; Humphreys, Wakerman, Kuipers, et al., 2009).

Many of the extrinsic incentives are linked. Poor access to professional development (Fitzgerald et al., 2000; Gillham & Ristevski, 2007; Harding et al., 2006; Kruger & Tennant, 2005) and insufficient supervision (Fitzgerald et al., 2000; Steenbergen & Mackenzie, 2004) could both exacerbate the sense of professional isolation. For example, occupational therapists reported difficulty accessing feedback on their performance (Devine, 2006). Services that implemented strategies to improve supervision and professional development opportunities reported positive outcomes (Battye & McTaggart, 2003; Stagnitti et al., 2006); however, it should be noted that one study (Stagnitti et al., 2005) failed to find a significant association between access to professional development and intention to stay.

There were mixed findings about the financial implications of remote and rural work. Private practitioners tended to report a stronger financial motivation to work rurally; particularly pharmacists, physiotherapists and dentists (Allan et al., 2007; Hall et al., 2007; Mulcahy et al., 2010). Interestingly, a study of the Northern Territory (Australia) dental workforce reported that financial incentives did not have lasting effects for retention as dentists recruited on the basis of salary tended to be retained for five years or less (Hall et al., 2007). In contrast, young graduates who believed their responsibilities were greater than their financial compensation were dissatisfied (Millstead, 2001).

A frequently mentioned positive extrinsic incentive for AH professionals to work in rural or remote areas is the perception that these positions facilitate rapid development of professional and administrative skills due to the broad experience and diverse presenting caseloads (Allan et al., 2007; Manahan et al., 2009; Williams et al., 2007). New graduates find this particularly attractive as it provides a career fast-track, a growth experience, to secure a subsequent position in an urban area (Lee & Mackenzie, 2003; Millstead, 2001). However, the resultant turnover disadvantages the region and has led to the labelling of remote and rural areas as 'professional nurseries' (Miles, Marshall, Rolfe, & Noonan, 2006).

In contrast to the desirable career fast-track potential is the anxiety expressed by some AH professionals over losing professional skills when working in isolated remote or rural positions (Huntley, 1991; Millsted, 2001). Perceptions of metropolitan peers not respecting skills obtained in remote or rural practice were reported (Parkin et al., 2001) but often found to be untrue when returning to urban positions (Millsted, 2001). Anxiety concerning the maintenance of professional skills is associated with frustration that specialisation and a career pathway for rural generalist clinical AH professionals does not exist (Beggs & Noh, 1991; Blood et al., 2002; Kaegi et al., 2002; Williams et al., 2007). Creative professional development opportunities and two-way collaboration with metropolitan centres could assist; however, policies and strategies to fund and backfill positions during leave must be implemented (Parkin et al., 2001). Interestingly, a recent study on rural Canadian occupational therapists reported more reward than challenge in rural work and theorised that access to professional development and support using telehealth and other distance technologies may be making a positive difference (Wielandt & Taylor, 2010).

A number of extrinsic incentives related to characteristics of rural living. Rural lifestyle (Kruger & Tennant, 2005; Manahan et al., 2009), the presence of family locally (Hall et al., 2007; Sidell et al., 2006), and positive financial affordability make some rural areas more attractive than urban areas (Denham & Shaddock, 2004; Manahan et al., 2009). Conversely, it was clear that for some AH professionals the cost of living and the cost of accessing professional and social networks are higher in remote and rural areas (Bent, 1999; Devine, 2006). Thus, personal views on rural living, desire to locate near to family and the financial implications of the particular remote or rural location are unique to individuals. Selection of rural background students into training programs and adequate provision of work and educational opportunities in rural areas for extended families (Kruger & Tennant, 2005) could positively influence retention at critical life-stage decision points.

A large number of studies highlighted the stress resulting from managing large caseloads in remote areas (Devine, 2006; Foster & Bharvey, 1996). In stark contrast, only two studies reported manageable caseloads and concomitant increased job satisfaction (Battye & McTaggart, 2003; Blood et al., 2002). Lack of locum support combined with long working hours (Allan et al., 2007; Blood et al., 2007), lack of access to air travel (Kaegi et al., 2002) (which would reduce time required to travel to clients), excessive travel (Fitzgerald et al., 2000; Williams et al., 2007), as well as the idea that 'there is nobody else' (i.e. positions are left unfilled (Bent, 1999)) add to the stress.

Overall, the studies demonstrated that hygiene factors or positive extrinsic incentives were lacking, underscoring the risk of continued high turnover of AH professionals working in rural and remote areas, in part from reduced job satisfaction.

2.1.5.2 Intrinsic incentives

Intrinsic incentives are what makes a person feel good about engaging in their job (Deci, 1975; Herzberg et al., 1959) and contribute directly to job satisfaction. In the literature reviewed this included themes such as challenge and autonomy. A predominance of intrinsic incentives with a positive effect is shown in Figure 2-3.

Autonomy was the most frequently mentioned intrinsic reward and is aligned with other literature (Herzberg et al., 1959; Ryan & Deci, 2000) which emphasises the importance of autonomy in building motivation. Autonomy was valued in regard to decision-making about caseload management and schedules (Allan et al., 2007) when it allowed work to be structured in a way that suited the professional (Devine, 2006) and because it allowed professionals to respond creatively to community needs rather than being locked into a bureaucratic system of service delivery (Lonne & Cheers, 2004).

There was a strong theme of connectedness operating as an intrinsic incentive. While the presence of extended family enhanced connectedness to communities (Manahan et al., 2009), professionals also reported an emotional commitment to rural life (Allan et al., 2007). Rural communities can enhance or reduce the motivation of AH professionals to remain in their community by facilitating friendships and support networks (Hall et al., 2007); the isolation experienced by young professionals can be alleviated by access to peers (Lee & Mackenzie, 2003). Educational (Kruger & Tennant, 2005), and employment provision (Harding et al., 2006) for the AH professionals' families also enhanced feelings of belonging.

Challenge, as an intrinsic motivator, exists on a continuum. Intrinsic motivation will flourish when the level of challenge contributes to a sense of achievement and fulfilment but does not overwhelm (Amabile, 1998). The AH professionals who felt they could not meet the needs of the community reported being overwhelmed (Kaegi et al., 2002). For example, new graduates enjoyed the challenge of diverse responsibilities found in remote and rural work and felt that the long-term career benefits outweighed the disadvantages (Lee & Mackenzie, 2003), while experienced professionals looking for a new challenge were attracted by the novelty of working with Indigenous communities (Bent, 1999). The drawback to this finding is that novelty alone appears insufficient to influence long-term retention. Hall et al. (2007) demonstrated statistically that retention of dentists in remote areas who were motivated by the novelty of cultural challenge was five years or less. Workplaces seeking to reduce high recruitment costs (Humphreys, Wakerman, Kuipers, et al., 2009) should look beyond novelty as an inducement and should ensure that new professionals are well-oriented and supported for the challenges they will encounter.

Retention is negatively impacted when professionals do not feel their work is significant or respected. Therefore, it is a concern that some studies found AH professionals felt that their work

was not valued by the community (Denham & Shaddock, 2004). This was more likely to be an issue for professions such as occupational therapists whose role can be diverse. Supportive management practices, such as timely recruitment to vacancies (Bent, 1999), locum provision, teamwork (Lee & Mackenzie, 2003), a critical mass of professionals (Denham & Shaddock, 2004), strong liaison with other local health providers and engagement with the community (Lonne & Cheers, 2004) to ascertain their needs, could alleviate this feeling. Furthermore, when positions are vacant for long periods, as is often the case in remote areas, it is much harder for incoming professionals to build networks and establish credibility and trust (Millsteed, 2001).

2.1.5.3 Job satisfaction and the imbalance of extrinsic and intrinsic incentives

The findings of this literature review have demonstrated that the extrinsic/intrinsic classification is a useful framework from which to consider the motivation of AH professionals to work in remote and rural areas. Figure 2-2 and 2-3 show overwhelming predominance of extrinsic disincentives compared with all other incentives. Given Herzberg's contention that extrinsic disincentives reduce job dissatisfaction, the burden of negative extrinsic factors would suggest the likelihood of a dissatisfied workforce.

Most of the studies did not formally assess job satisfaction. Those that did frequently commented that AH professionals were dissatisfied with aspects such as conditions of employment (Millsteed, 2001). Despite these frustrations, summary comments often referred to AH professionals being satisfied with remote and rural work (Hughes, 1998). These kinds of statements are likely referring to the intrinsic factors which are providing a measure of satisfaction but cannot fully mediate extrinsic disincentives. Congruent with literature on urban AH professionals (Moore, Cruickshank, & Haas, 2006) and nursing (Opie et al., 2010), it could be hypothesized that high turnover is related to job dissatisfaction from extrinsic incentives.

2.1.5.4 Policy implications

Evidence from the medical workforce suggests that policy aimed at addressing the extrinsic disincentives may make a difference to AH professional workforce recruitment and retention. Australian government policy provides significant extrinsic incentives to the rural and remote medical workforce as a successful strategy to reduce shortages (Humphreys, Wakerman, Pashen, et al., 2009), with the literature showing remote and rural doctors to also have a lower risk of turnover than AH professionals (Humphreys, Wakerman, Kuipers, et al., 2009). Finally, the literature on general practitioner job satisfaction demonstrates reasonable job satisfaction regardless of location (McGrail, Humphreys, Scott, Joyce, & Kalb, 2010). Given the complementary relationship between extrinsic and intrinsic incentives, fortifying the existing intrinsic incentives might be a parallel strategy to addressing the recruitment and retention challenges.

2.1.6 Limitations and further directions

This analysis was unable to capture data on the interaction between incentives and life-stage because this workforce demographic was not always examined in the literature. It appears that new graduates are more willing to cope with an absence of extrinsic reward because of the potential benefits they gain. Looking at life-stage could be an important avenue for future research (Chisholm et al., 2011), with the potential to reduce retention problems further by implementing life-stage-appropriate strategies.

2.1.7 Conclusion

Extrinsic motivation factors for remote and rural AH professionals are clearly deficient. Recruitment and retention strategies must address this need urgently. While it is clear that the intrinsic incentives which contribute to job satisfaction are present, they appear insufficient to mediate for the burden of extrinsic disincentives which contribute to excessively high turnover. The absence of positive extrinsic incentives is eroding job satisfaction that could improve retention. As demonstrated in the literature (Battye & McTaggart, 2003; Parkin et al., 2001), remote and rural healthcare organisations that encourage and foster the fulfilment of the intrinsic motivation of a professional, as well as providing the extrinsic elements to motivation, have the most potential to recruit and then enhance the longevity of the AH professional in that position.

2.2 The influence of personality

Having looked extensively at the literature impacting on the motivation of AH professionals in rural and remote areas through my published article, this literature review will now turn to personality and its influence on career selection and decision-making. Firstly, it will define personality and introduce the two influential theories of personality underpinning the methodology used in this thesis. It will then move to the known literature describing the influence of personality on health professional career decision-making and conclude with the literature specific to AH professionals. The wide contextual perspective is justified by the scarcity of literature specific to AH.

2.2.1 Defining personality

In his seminal work, Gordon Allport defined personality as the 'dynamic organisation within an individual of the psychophysical systems that determine his unique adjustments to his environment' (Allport, 1937, 1971, p. 48). This definition encapsulates personality as the active and generally predictable way that individuals respond to, interact with, and learn from, other people, events and circumstances.

It is well-recognised that modern personality research maintains two related but separate emphases. The first is the study of individual differences (the dimensions which vary between people) and the second is the study of individuals as integrated wholes (McAdams & Pals, 2007; Winter & Barenbaum, 1999). The importance of a dual approach was supported by Molden and Dweck (2006) who suggested that 'the search for universal principles of human behaviour' should be accompanied by developing an understanding of 'how people give meaning to their experiences and to their relations with the world around them' (p. 192). Similarly, Butt and Burr (2004) advocated that the goal should not be to discover the correct theory *per se* but to 'examine the usefulness of each in helping us understand the nature of people' (p. 3). Therefore, the next section of the literature review will begin with a discussion of the universal principles associated with *trait theory*, before moving into *Personal Construct Psychology*, the theory concerned with understanding how individuals make meaning. Trait and personal construct theory were selected because their complementary strengths, which will be detailed in the followed sections, made them particularly suited to answering the research question. This two-pronged approach will lay the foundation for the methodology presented in Chapter 3 by contextualising the investigation of individual differences in this thesis.

2.2.2 Trait approaches

Trait theories of personality emphasise individual differences in personality along basic dimensions or traits which are viewed as consistent, measurable behaviours (McCrae & John, 1992). Therefore, trait theories are usually associated with the positivist research paradigm, where objective measurement of assumed absolute truth is undertaken (Creswell, 2014). Cervone and Pervin (2010) posit that traits serve the scientific functions of description and prediction. The

descriptive function describes individuals, as well as offering a taxonomy that can be applied to any person. The predictive function proposes that the taxonomy is of practical value in predicting everyday behaviour (Cervone & Pervin, 2010).

Thus, when using traits to describe the personality of an individual, more frequently observed behaviours are more important than less frequently observed behaviours (Robbins et al., 2010). In particular, trait theorists ask how much of each dimension does any particular individual have and how does the level of a dimension and the interaction between the dimensions explain the individual's behaviour. Dependent on the model, the dimensions can include traits such as 'extraversion', 'neuroticism' and 'novelty seeking' (Cloninger et al., 1993). Each trait is usually considered a continuous variable with a normal distribution ranging between two extremes (Pittenger, 2005). It is important to distinguish trait theory dimensions from personality typologies measured by instruments, such as the well-known Myers-Briggs Type Indicator, which classify individuals to personality types and treat them as distinct groups demonstrating 'homogeneity of variance within groups and heterogeneity of variance between groups' (Pittenger, 2005, p. 221).

The taxonomy used within trait approaches to personality, i.e. the number of traits, and the scales that measure these traits, can be bewilderingly large (John & Srivastava, 1999). The origins of modern trait theory are usually attributed to Allport's lexical approach. His list of natural language personality descriptions comprised almost 18,000 items distributed across four categories (Allport, 1937, 1971; John & Srivastava, 1999).

Allport's seminal work spurred the development of other less wieldy and more practical taxonomies that distinguish individual differences in people's behaviour. In particular, Cattell used Allport's list to identify 16 personality factors. His major contribution was to demonstrate the utility of factor analysis in the search for the universal dimensions of personality (Cervone & Pervin, 2010), while his personality scale, the 16 Personality Factor (16PF), is still in use (Cattell, Eber, & Tatsuka, 1970; Cervone & Pervin, 2010; John & Srivastava, 1999; Kluger, Laidlaw, & Khursandi, 1999).

Factor analysis was subsequently applied widely and resulted in recognition of the Big Five or Five Factor Model (Goldberg, 1981; McCrae & John, 1992). As a five-factor descriptive taxonomy, each dimension (e.g. extraversion) represents a range of attributes (e.g. outgoing, energetic, reserved) (John & Srivastava, 1999). The Big Five has been widely replicated (Goldberg, 1981) and resulted in a number of scales, including the well-known NEO Personality Inventory (Costa & McCrae, 1985) and the Big Five Inventory (John, Donahue, & Kentle, 1991). The commonalities across models are strongest for the factors of Extraversion, Neuroticism (stability of emotion) and Conscientiousness, but more diverse for Agreeableness and Openness to experience (John & Srivastava, 1999). Despite its wide adoption and validation across diverse populations (McCrae & John, 1992) the Five Factor Model has been criticised. Criticisms include ongoing debate about the number of factors that make up personality, in addition to the Five Factor Model's descriptive rather

than explanatory emphasis, i.e. a data-driven rather than a theory-driven approach (John & Srivastava, 1999).

Cloninger et al. (1993) presented a biopsychosocial model of personality based on seven dimensions, four temperament and three character, and proposed that it accounted for the 'underlying biologic and social determinants of personality' (p. 977) in ways that Five Factor Models based on factor analysis could not. In particular, Cloninger (2008) argued that 'human personality is not adequately characterised as a set of linear traits because the components of personality are non-linear in their functional effects and relationships with one another' (p. 294). He defined further that it is 'a complex expression of nonlinear interactions among a whole hierarchy of learning systems' (p. 294). These include overlapping emotional (habits and skills), cognitive (facts and propositions) and spiritual (self-aware learning) systems (Cloninger, 2008).

Temperament represents the individual's unconscious, automatic responses that are moderately heritable, observable from childhood, somewhat predictive of adult behaviour, and relatively stable throughout life (Cloninger et al., 1993, p. 977). Temperament dimensions are modulated through the brain's limbic system and striatum. Both genetic human and neurobiological animal model studies contributed to the development of the temperament model.

In contrast, character represents intentional responses, values and goals based on learning, insight and maturation. In this way, character dimensions are observed as modifiable responses based on socio-cultural learning, which address differences in self-concept, more specifically relationships with self, others and other objects. Character dimensions are modulated through the brain's temporal cortex and hippocampus.

Thus, temperament involves 'procedural learning of habits and skills whereas character involves propositional learning of goals and values' (Cloninger, 1998, p. 3). Cloninger suggests that personality development is therefore 'an iterative epigenetic process' where 'temperament and character development influence each other and motivate behaviour' (Cloninger et al., 1993, p. 978). To put this another way, from the perspective of the biopsychosocial model, the personality of an individual is observed as the combination of temperament and character traits, with the levels of the various dimensions interacting together (Cloninger, Zohar, & Cloninger, 2010; Kluger, Laidlaw, Kruger, & Harrison, 1999).

A large Australian twin study (Gillespie, Cloninger, Heath, & Martin, 2003) validated the inclusion of the seven dimensions in the model on the basis of heritable influences of temperament dimensions compared with shared environmental influences of character. The seven temperament and character dimensions are shown in Table 2-3 and include descriptors indicating observable differences in behaviour depending on levels of the dimension. Low levels of a dimension are shown in the left description column and high levels in the right.

Table 2-3: Temperament and Character Descriptors*

TEMPERAMENT DIMENSIONS	Description	
	Low and high levels observed as:	
Novelty Seeking	exploratory activity in response to novelty, impulsiveness, and extravagance indifferent, reflective frugal, detached orderly, regimented	exploratory, curious impulsive, disorderly extravagant, enthusiastic seeks challenge
Harm Avoidance	pessimistic worry in anticipation of problems, fear of uncertainty, shyness with strangers, and rapid fatiguability relaxed, optimistic bold, confident outgoing, vigorous opinionated, decisive	worrying, pessimistic fearful, doubtful shy, fatiguable indecisive
Reward Dependence	social reward observed as sentimentality, social sensitivity, attachment, and dependence on approval by others practical, cold withdrawn, detached independent not influenced by others socially insensitive	sentimental, warm dedicated, attached dependent needs to please seeks approval from others
Persistence	behaviour despite frustration, fatigue and reinforcement; observed as industriousness, determination and perfectionism inactive, indolent gives up easily un-ambitious underachiever quitting, pragmatist	industrious, diligent hard-working ambitious, overachiever perseverant, perfectionist determined
CHARACTER DIMENSIONS	Description	
	Low and high levels observed as:	
Self-directedness	the extent to which an individual is responsible, reliable, resourceful, goal-oriented and self-confident blaming, unreliable purposeless, inert, ineffective habits congruent with short-term goals	responsible, reliable purposeful, resourceful, effective habits congruent with long-term goals

CHARACTER DIMENSIONS cont.	Description		
	Low and high levels observed as:		
Cooperativeness	the extent to which individuals are cooperative, tolerant, empathic and principled socially intolerant critical, unhelpful revengeful, destructive opportunistic	\longleftrightarrow	socially tolerant empathic, helpful compassionate, constructive ethical, principled
Self-transcendence	the extent to which individuals conceive themselves in relation to the universe as a whole. It is observed as spirituality, practicality, materialism and modesty impatient unimaginative proud, lack of humility materialistic practical	\longleftrightarrow	wise, patient creative, imaginative self-effacing united with universe modest, humble, spiritual

*Adapted from Cloninger et al. (1993)

Operationalised through the Temperament and Character Inventory (TCI) (Cloninger et al., 1994), combinations of levels of dimensions have been shown to differentiate between well-adjusted individuals and those with personality disorder (Bricaud, Calvet, Vieban, Prado-Jean, & Clement, 2012; Cloninger et al., 1993; Jiang et al., 2003). For example, high Harm Avoidance and low Self-directedness were associated with mood or anxiety disorder (Cloninger, Zohar, Hirschmann, & Dahan, 2011); lower Cooperativeness and Self-directedness indicated personality disorder; and higher ratings indicated mature personality (Kluger, Laidlaw, Kruger, et al., 1999). Further, higher levels of Self-directedness, Cooperativeness and Self-transcendence have been associated with personal well-being (Cloninger & Zohar, 2011; Josefsson et al., 2011).

Trait theorists have traditionally held that the adult personality is stable and consistent (Helson, Kwan, John, & Jones, 2002). The reasons for observed personality differences across generational cohorts has been debated (Robbins et al., 2010), with some concluding that changes in the sociocultural context, particularly cultural shifts in child-raising norms, are responsible (Smits, Dolan, Vorst, Wicherts, & Timmerman, 2011; Twenge, 2009). However, a systematic review of the literature on adult personality identified that personality change does occur during adulthood (Helson et al., 2002), with age moderating trait expression (Magee et al., 2013). Using Dweck's (2008) perspective, maturation impacts personality such that biological tendencies are modified by the experiences, beliefs and goals of individuals. Cloninger's biopsychosocial model (Cloninger et al., 1993) accommodates developmental maturation of personality, particularly in regard to the character traits, with Self-transcendence being the strongest predictor of change but also, to a lesser extent, the temperament traits of Novelty Seeking and Persistence (Josefsson et al., 2013).

Investigation of genetic tendencies in personality using Cloninger's model demonstrated that the brain's neuroregulatory systems of dopamine and serotonin activity influence the expression of

traits, particularly Harm Avoidance and Self Directedness (Peirson et al., 1999). Although the strength of the genetic evidence has been contested (Herbst, Zonderman, McCrae, & Costa, 2000), recent work suggests the importance of the interaction between the neuroregulatory systems and the environmental milieu in influencing temperament traits (Keltikangas-Järvinen & Jokela, 2010).

Personality can be described in many different ways and as discussed, there are a variety of approaches to personality measurement. Although similarities in descriptors of traits are seen across most measurement tools, the same or similar name for a trait is often used to label different combinations of traits (Cloninger, 2010). For example, the TCI is empirically related to the Five Factor Model of personality (McCrae & John, 1992) as used for example in the NEO (Costa & McCrae, 1985; Costa, McCrae, & Kay, 1995; McCrae & John, 1992). The TCI dimensions have been found to be highly correlated with all Big Five traits (Cloninger et al., 2010; De Fruyt, Van De Wiele, & Van Heeringen, 2000; Grucza & Goldberg, 2007; Ramanaiah, Rielage, & Cheng, 2002; Zuckerman & Cloninger, 1996). Table 2-4, demonstrates this, showing correlations between the TCI dimensions (shown across the top row) and the NEO-PI-3 subscales (shown down the left column).

Table 2-4: Correlations between the scales of the TCI-R 140¹ with the NEO-PI-3²

NEO-PI-3	TCI-R-140						
	Novelty Seeking	Harm Avoidance	Reward Dependence	Persistence	Self-directedness	Cooperativeness	Self-transcendence
Neuroticism	0.09	0.55**	-0.01	-0.08	-0.56**	-0.14	-0.16
Extraversion	0.28**	-0.63**	0.48**	0.12	0.27**	-0.08	-0.03
Openness	0.22*	-0.06	0.04	0.13	0.01	0.04	0.10
Agreeableness	-0.31**	0.09	0.03	0.11	-0.03	0.64**	0.13
Conscientiousness	-0.51**	-0.19**	0.08	0.50**	0.51**	0.22**	0.04

N=753; **p<0.01, *p<0.05

¹Cloninger et al. (1993); ²McCrae and John (1992)

Thus, while Cloninger's biopsychosocial model distinguishes genetic and environmental influences on personality, it still arose from a positivist deterministic approach to traits, and therefore is somewhat limiting of the individual's agency to change (Butt & Burr, 2004). The next section introduces Personal Construct Psychology, the stance and methods of which add comprehensive richness to this discussion of personality because it uncovers the perspective of the individual.

2.2.3 Personal Construct Psychology

Each day's experience calls for the consolidation of some aspects of our outlook, revision of some, and outright abandonment of others. (Kelly, 1955a, p. 14)

Developed by George Kelly (1955a, 1955b) as a completely new psychological theory, Personal Construct Psychology is still relevant to contemporary thinking about personality (McWilliams, 2013; Walker & Winter, 2007; Winter, 2013). A psychologist with a long history of clinical work, Kelly's development of the theory was prompted by his dissatisfaction with the prevailing deterministic approaches to personality. This included Freud's psychoanalytic theory, which emphasised early experiences as 'setting in motion a chain of psychological events resulting in a pattern of relationships which the person is powerless to change' (Butt & Burr, 2004, p. 4), and trait approaches where the individual was passively positioned along the trait continuum. In contrast, Kelly aimed to understand how the individual actively construed or made sense of his or her life (Mischel, 1999, p. 261).

Personal Construct Psychology was based on Kelly's metaphor of 'man the scientist'. This metaphor distinguished his theory from the deterministic theories because the individual was seen as an agent capable of personal change. As a 'scientist', therefore, the individual generated and tested hypotheses in order to predict and control experience (Kelly, 1955a, p. 4). Hypotheses found useful for making sense of the world were then retained and 'organised cognitively as personal constructs' (Bannister, 2003; Dick & Jankowicz, 2001, p. 186).

Personal constructs can be thought of as personal beliefs or dimensions specific to the individual and used to make sense of experiences. Constructs are usually bipolar, that is, they exist on a continuum, e.g. kind-unkind (Fransella, Bell & Bannister, 2004). Constructs exist within a system, the personal construct system (Kelly, 1955a), with each individual's construing seen as unique to them.

New experiences confirm or disconfirm the individual's constructs and result in hypothesis development and personal construct system changes. Change in or revision of an individual's personal construct system is requisite to adaptation and might require consolidation, revision or rejection of constructs (Kelly, 1955a). Kelly described construct changes that were positively adaptive as a process of 'character development' (See Kelly, 1955b, p. 582; Smith, 2000, p. 225). However, he did recognise that not all changes in an individual's construct systems were necessarily 'for the good' (Kelly, 1955a, p. 73).

Personal Construct Psychology is a theory of *constructive alternativism*, which assumes that the world can be interpreted in a variety of ways, and therefore individuals actively impose constructions or meaning on life events and other people in order to understand them (Butt & Burr, 2004; Molden & Dweck, 2006). Kelly's (1955a) philosophical position was that 'all of our present interpretations of the universe are subject to revision or replacement' (p.15). Neimeyer (1992)

explained a personal construct system as ‘a matrix of meaning, a system of hierarchically organised dimensions that could be adjusted to a range of relevant events’ (p. 164). Construing, therefore, is about a systematic approach to interpretations and re-interpretations of experience (Kelly, 1955a), holding tentative understandings and reflecting on new explanations (McWilliams, 2013, p. 165).

Kelly formalised the theory around a fundamental postulate or basic assumption, and a number of corollaries. The fundamental postulate – ‘A person’s processes are psychologically channelised by the ways in which he anticipates events’ (Kelly, 1955a, p. 103) – reveals the way in which an individual’s construct system, their way of viewing the world, will influence their behaviour and decisions (Butt & Burr, 2004). In this thesis, the fundamental postulate reminds us that successful recruitment and retention of individual AH professionals to remote areas will depend at least in part on the beliefs and predictions of the individual about working in those regions, therefore adding weight to the imperative to uncover their construing about working in remote areas. Table 2-5 outlines Kelly’s Personal Construct Theory corollaries and provides information on what the corollaries mean in terms of this thesis.

Table 2-5: Personal Construct Theory corollaries applied to this study*

Corollary	Explanation of the corollary and application to this thesis
Construction corollary	<p>Personal constructs allow us to anticipate future events.</p> <p>Personal construct systems related to remote work will influence individual AH professionals in employment decision-making.</p>
Individuality corollary	<p>People construe events differently, and therefore an individual's constructs may be different from another's.</p> <p>The construing of an AH professional about remote work may be similar to or different from another's.</p>
Organisation corollary	<p>Constructs evolve and are related to one another in a systematic and potentially hierarchical fashion.</p> <p>An individual AH professional's construct system may evolve and re-organise depending on their experiences.</p>
Dichotomy corollary	<p>Constructs are bipolar; affirming something simultaneously means something else is denied, e.g. if someone is 'flexible' in a given situation then they cannot simultaneously be 'rigid' about that situation.</p> <p>Understanding how AH professionals construe remote work also means understanding what they construe remote work not to be.</p>
Choice corollary	<p>Faced with a dichotomy, individuals choose the construct alternative which appears most likely to them to make sense.</p> <p>AH professionals select work locations based on their construing of the alternative possibilities, which may be based on guiding principles as well as transient convenience.</p>
Range corollary	<p>Constructs operate within a context or sit within a range of convenience and therefore they are not all relevant to all situations.</p> <p>The constructs held by AH professionals related to working in remote will be finite in number and specific to their understanding of both the remote context and the professional responsibilities of AH professionals.</p>
Experience corollary	<p>Changes in an individual's construct system occur due to successive experiences.</p> <p>The variation in remote experience of individual AH professionals is likely to reveal differences in construing between individuals, and individual AH professionals may reveal changes in their construing due to experiences.</p>
Modulation corollary	<p>Variation in an individual's construct systems is limited by the permeability (openness or adaptability) of their constructs.</p> <p>Permeable construct systems may aid in resilient management of work challenges.</p>
Fragmentation corollary	<p>Within an individual, constructs can be in conflict with one another, usually because of context and role.</p> <p>Even in individuals, inconsistency in constructs related to working in remote areas may be observed.</p>
Commonality corollary	<p>Constructs can be similar across groups of people.</p> <p>AH professionals as a group are likely to share common constructs about remote work.</p>
Sociality corollary	<p>Our construct systems allow us to observe and interpret the behaviour of others and the meaning of that behaviour to them.</p> <p>AH professionals' approach to work may be altered by their observation and interpretation of the behaviour of other AH professionals and of the clients with whom they are working.</p>

*For further detail see Kelly (1955a, pp. 50-102) and Fransella et al. (2004, pp. 9-12)

Thus, to sum up the application of Personal Construct Psychology and a constructive alternativism framework in this thesis, the words of Butt and Burr (2004) are appropriate.

Kelly saw that people are like scientists in that their actions are guided by the theories they hold about themselves and those around them; the questions they are currently asking. These questions or theories are the person's bridge between their past and their future. They are shaped by experience, provide the framework for future action and are responsible for the particular anticipatory stance we take. They alert us to some events and blind us to others ... Kelly insisted that if you want to help people to change, you must first understand the construction they are placing on their world, the theories they hold, and the questions they are asking. (Butt & Burr, 2004, p. 3)

The best-known investigative technique to explore an individual's construct system using a Personal Construct Psychology approach is the repertory grid interview (Fransella et al., 2004; Kelly, 1955a). While detailed information about repertory grid interviews will be provided in the methodology chapter (Chapter 3), in this chapter it is important to note that there is a body of Personal Construct Psychology literature that has investigated construing about work, particularly related to career decision-making and the construing of success.

Neimeyer (1992) demonstrated that changes in an individual's construct system over time have important implications for career development and that the repertory grid interview could usefully reveal the important constructs related to vocational decision-making for individuals. Butler (2006) identified four core constructs as fundamental to identity or a sense of self. These constructs were: making sense (self-competence), relatedness, achievement and individuality. Butler proposed that experiences which validate or invalidate these core constructs would result in emotion (positive or negative), and that work was one context used by individuals to seek validation of their core constructs.

Fournier (1997), in a longitudinal study of business graduates, found perceived success at work was initially associated with flexibility and social behaviour but later changed to flexibility and work achievements. More recently Terjesen, Vinnicombe, and Freeman (2007) reported Generation Y employees sought work variety, forward-thinking approaches and investment in career training and development opportunities, as well as a caring work environment.

Repertory grid interviews were also used in a study of British police culture (Dick & Jankowicz, 2001). The findings concluded that rank was more influential than gender when making judgements about work performance; and that work commitment, being easy-going but efficient and dependable, and having a focus on relationships were the key attributes valued.

Finally, although not using a Personal Construct Psychology approach in his study of work success, Heslin (2005) found that visible signs of career success, such as pay or promotion, may be less important to individuals than how they conceptualise their own success. This finding

supports the stance taken in this thesis that it is important to understand the construing of AH professionals about themselves and others in relation to success in remote work.

Further studies based on Personal Construct Psychology will be included in the next sections specific to influences of personality on work. However, it is important to conclude here with a reminder that Kelly's theory and techniques, radical when first developed, have been recently defended as 'still radical' and relevant nearly sixty years later (Winter, 2013).

The final three sections of this chapter situate the research question in the body of literature related to career preferences and personality. It will build the argument that career choices can be shaped but not necessarily predicted by personality. As the evidence for the role of personality in AH professional career selection is very small, this section will include the associated health professions of medicine and nursing. It will also examine the evidence for the influence of personality in becoming a rural or remote health professional.

2.2.4 Personality in career selection or prediction

The influence of personality has long been associated with career selection and work satisfaction. Studies comparing occupational choices or predictions have used diverse measures, including personality typologies (e.g. Holland, 1997 job-person fit), various trait approaches (e.g. Cloninger et al., 1994; Costa & McCrae, 1985) and Personal Construct Psychology techniques (e.g. repertory grid interviews as in Neimeyer, 1992). Potentially, understanding whether specific traits, attributes or personality types make individuals better suited for certain types of work environments and produce greater job satisfaction would be valuable for individuals making career choices and for employers seeking to successfully recruit.

In evaluating this literature, it is important to remember that the linking of career outcomes with personality characteristics is imperfect. As Yufit et al. (1969) explain, given a 'conflict-free' choice, individuals are likely to select a career aligned with their interests. However, other influences are often present. Examples include personal circumstances, commitments and available opportunities.

Personality traits have been shown to shape but not necessarily predict career outcomes in several longitudinal studies (Schoon, 2001; Sutin & Costa, 2010; Woods & Hampson, 2010). For example, lower levels of agreeableness were associated with more hazardous work (Sutin & Costa, 2010), while higher levels of extraversion, openness and conscientiousness were associated with work requiring greater autonomy in decision-making (Sutin & Costa, 2010). Openness and conscientiousness have been reported as strong moderators of occupational choice and successful work performance (Barrick & Mount, 1991; Tokar, Fischer, & Mezydlo Subich, 1998; Woods & Hampson, 2010), including in medicine (Doherty & Nugent, 2011). Higher levels of neuroticism decreased life satisfaction (Magee et al., 2013), while lower levels increased job

satisfaction (Tokar et al., 1998). Higher levels of extraversion were found in individuals working in roles with a high need for interaction with others (Barrick & Mount, 1991).

Providing further evidence for the role of personality in shaping but not necessarily predicting with fine-grained accuracy, the fit between personality and career outcomes was pioneered in medicine by Yufit et al. (1969) and Wasserman, Yufit, and Pollock (1969). They categorised the work demands of medical specialities as being either 'person-oriented' with a focus on the therapeutic relationship, or 'technique-oriented' with a focus on technical skills and procedures. Students who self-predicted a preference for technique-oriented specialities were less likely to change their preferences over the course of their training. Further, a preference for distance ('passive withdrawal or active rejection' p. 90) in interpersonal relationships was associated with a preference for technique-oriented specialities (Yufit et al., 1969).

2.2.5 Personality studies in medical students, doctors and nurses

A small but important body of research over the past 40 years has investigated links between psychological traits and medical speciality or speciality intent in order to influence recruitment to specific specialities or provide tailored vocational advice to trainees.

Building on the person- or technique-oriented classification (Wasserman et al., 1969; Yufit et al., 1969) described above, Mowbray and Davies (1971) reported differences between trainee psychiatrists and surgeons that were said to align with speciality work demands. Although cautioning that differences were not prescriptive, they found psychiatry trainees tended to be theoretically-minded and surgical trainees to be practical-minded, in keeping with the person- or technique-orientation respectively. Recent longitudinal investigations based on the person- or technique-orientation in medical specialities reported that medical students characterised by warmth, rule-conscientiousness and apprehension were more likely to enter person-oriented specialities such as internal medicine or paediatrics, compared with students characterised by dominance, tension and vigilance who were more likely to enter technique-oriented specialities such as radiology, surgery or pathology (Borges & Savickas, 2014; Taber, Hartung, & Borges, 2011).

Personal trait levels as a prognostic marker associated with specific speciality preferences by medical students and practising doctors have been detected in a number of studies. For example, an international study found physicians to be higher in Cooperativeness than anaesthetists (Kluger, Laidlaw, Kruger, et al., 1999). Table 2-6 presents findings from the literature on associations between personal attributes and speciality intent in medical students.

Table 2-6: Medical student personal attributes associated with speciality preference

Speciality Intention	Personal Attribute	Study
Psychiatry	Higher Openness	Coulston, Vollmer-Conna, and Malhi (2012); Malhi et al. (2011); Markert et al. (2008); Maron et al. (2007)
Family Practice	Lower Neuroticism	Maron et al. (2007)
	Feeling Type	Stilwell, Wallick, Thal, and Burleson (2000)
Primary Care	Higher Agreeableness	Coulston et al. (2012)
Paediatrics	Higher Reward Dependence	Vaidya et al. (2004)

Interestingly, there are inconclusive findings for associations between surgical intent and medical student personal attributes. These range from finding no association (Maron et al., 2007), to differences associated with gender (Coulston et al., 2012), as well as more definitive findings of lower Harm Avoidance (Vaidya et al., 2004), and a tendency to extraversion (Stilwell et al., 2000).

Overall, the linking of openness with psychiatry appears to be the most well-established finding. The diversity in findings potentially results from the studies' methodological diversity; i.e. heterogeneous samples, range of personality scales, and the potential for gender, age and life goals to mediate the influence of personality on speciality choice (Buddeberg-Fischer, Klaghofer, Abel, & Buddeberg, 2006; Kluger, Laidlaw, & Khursandi, 1999). Thus, speciality choices are rarely conflict-free choices where the individual only has to consider their preference on the basis of fit with personality (Yufit et al., 1969).

An emerging body of personality research has focussed on geographic workforce shortages, specifically seeking to understand personality features associated with an affinity for rural or remote work. Longevity in rural work for Australian general practitioners (GPs) was associated with lower levels of openness, described as 'a down to earth' personality (Jones, Humphreys, & Nicholson, 2012), while interestingly, medical students with rural intent were found to have higher levels of openness (Jones et al., 2013). Higher extraversion was associated with reduced intention for rural work (Jones et al., 2013), compared with higher agreeableness and conscientiousness, which were associated with rural intention for both medical students (Wilson et al., 2013) and current rural GPs (Jones et al., 2012). Students participating in rural placements have been reported as being very high in Self-directedness, Persistence and Cooperativeness (Brooks, Eley, & Zink, 2014; Eley, Brooks, Zink, & Cloninger, 2014; Eley, Young, & Przybeck, 2009a) and having lower Harm Avoidance in rural students compared with urban-based students (Brooks et al., 2014; Eley et al., 2009a). In general, these combinations of trait levels are likely to be helpful for managing the specific challenges of rural practice, such as uncertainty, isolation and resource limitations.

There is also a small body of work that draws on either trait approaches or Personal Construct Psychology techniques to investigate the personality traits of nurses. As a profession who identifies itself as caring, compassionate and hard-working (Ellis, 2006; March & McPherson, 1996; Retsas & Wilson, 1997), these traits include high Reward Dependence, Persistence, Cooperativeness and Self-directedness (Eley et al., 2012; Eley et al., 2011). Younger nurses had higher levels of Novelty Seeking and Harm Avoidance compared with older ones (Eley et al., 2011). Emergency nurses were higher in extraversion, agreeableness and openness to experience (Kennedy, Curtis, & Waters, 2014), traits appropriate for the rapid pace of work in an emergency department. However, these traits may become problematic for a nurse who strongly holds to a construct of caring demonstrated by having time with patients (Ellis, 2006). Characteristics of effective nurses, elicited in several repertory grid studies (Retsas & Wilson, 1997; Wilson & Retsas, 1997), showed that caring and problem-solving were important characteristics, but not always exhibited by nurses. 'Effective nurses' were not construed as autonomous or self-directed. If this is a widespread perception, it could be problematic as the profession lobbies for increased independence of professional practice (Retsas & Wilson, 1997). Thus, the literature confirms the stereotype that caring is a key attribute in nurses, but suggests that there may be work environments or circumstances where other attributes, for example Self-directedness, may facilitate a better job-person fit.

2.2.6 Personality studies in allied health professionals

There is very little literature investigating personality in remote AH professionals. Comparison across the handful of studies of AH professions is difficult because the studies are small, use a variety of personality measures and tend to focus on individual professions or compare two professions. Because of the small numbers, each study will be described in more detail than the previous section on medicine and nursing.

A comparison between American female students in AH and female and male medical students on a range of psychosocial and personality measures reported similarity between the groups on neuroticism, extraversion, self-esteem and external locus of control. The AH students differed in higher anxiety and depression levels (Hojat & Lyons, 1998).

Dodd et al. (2009) compared the characteristics of the Australian AH workforce across generational groups (Generation Y, 20-29 years; Generation X, 30-39 years; and Baby Boomers, 40-49 years at the time of the study). Although the study did not specifically attempt to link recruitment and retention with geographic remoteness, the generational differences described suggest evidence for understanding who might be available for recruitment to remote areas, and further understanding of potential retention issues for professionals in remote areas. The youngest group, Generation Y, reported three main reasons for separation from work: travel (including overseas work); working with a different client group; and lack of professional development.

Generation X reported reasons as family commitments and travel, while younger Baby Boomers cited family commitments. This supports the earlier argument that career choices are frequently impacted by personality, in combination with other considerations such as personal commitments, health, life-stage and so on (Yufit et al., 1969). It also suggests that Novelty Seeking, or desiring new professional and personal experiences, interacts with life-stage to influence retention.

Several studies that examined the influence of personality on career selection in students revealed similarities rather than distinguishing differences among AH professional student groups. Byrne (2008) reported altruism as a consistent attribute influencing career selection for students in speech pathology, physiotherapy and occupational therapy (and teaching). Adamson, Covic, Kench, and Lincoln (2003) compared first year Australian medical radiation students with speech pathology students and found minimal type differences (Keirsey Temperament Sorter II). The majority of the students identified as Guardian types (responsible, dutiful, concerned for others), followed by Idealists (intuitive, philosophical and able to identify with others). This finding appears to echo the high levels of Persistence, Self-directedness and Cooperativeness reported for medical students (e.g. Eley et al., 2014). It was suggested that professional socialisation may influence changes in personality type, and therefore greater divergence between the professions may be detectable at a later stage in training (Adamson et al., 2003).

A study using the TCI in a cross-sectional design investigated personality in 346 Australian dietitians (Ball, Eley, Desbrow, Lee, & Ferguson, 2014). Results showed the sample was different from population norms but had average levels of Novelty Seeking, and high levels of Harm Avoidance, Reward Dependence, Persistence, Self-directedness and Cooperativeness. Self-transcendence was low. Gender and age differences were noted, with females having higher levels of Reward Dependence and younger dietitians having higher levels of Harm Avoidance. No differences were associated with rural background. With the exception of the high Harm Avoidance, these results were similar to those reported in studies of Australian nurses, doctors and medical students (Eley et al., 2012; Eley et al., 2009a, 2009b)

Several studies have focussed on occupational therapy. In a small Canadian study (Brown, 1989) using the Personality Research Form-E, personality traits of occupational therapy students and practising clinicians were found to be indistinguishable from the population norms. However, students showed a decrease in levels of endurance and nurturance over their training. It was suggested that this may be associated with work overload in juggling the dual roles of student clinician and university student, and holding initially unrealistic expectations about the clinical role. Further differences which may be related to age were detected between clinicians and final year students, with clinicians demonstrating higher Harm Avoidance levels and lower levels in many other traits. Although not described by the authors, this difference may also hint at maturational processes.

A longitudinal study (Donohue, 1995) used the California Psychological Inventory at the beginning and end of the training course in a sample of 49 occupational therapy students. Positive psychosocial trait change across time (particularly in achievement and independence) was reported and, like Adamson et al. (2003), the authors concluded that this was commensurate with professional socialisation. A larger study (Lysack et al., 2001) found differences between occupational therapists and physiotherapists using a personality type measure, the Kiersey Bates Personality Inventory. Compared with the physiotherapists, the occupational therapists were higher in sensing-perceiving or intuitive-feeling. This finding appears to match the person- or technique-orientation approach developed by Yufit et al. (1969). For example, occupational therapists, potentially in a person-oriented profession, may be required to interact with clients in intimate interpersonal environments, such as when undertaking rehabilitation of daily living skills (e.g. dressing, showering and toileting).

Investigations of the personality characteristics of medical technologists aimed to understand their work preferences and willingness to adapt to professional change (Dominelli & Wheeler, 2006). Using the Sixteen Personality Factor Questionnaire, Dominelli & Wheeler (2006) found that the sample studied was different from population norms but potentially suited to current workplace requirements. Adapting to rapid technological development and team approaches to healthcare was potentially impeded by the sample's lower levels of extraversion and independence, coupled with higher anxiety, perfectionist thinking and limited openness to alternative views.

Three studies on personality in the pharmacy profession used the Gordon Personal Profile Inventory (Gordon, 1993). Cocolas, Sleath, and Hanson-Divers (1997) reported that students scored lower than qualified pharmacists on all traits except sociability, whereas Cordina, Lauri, and Lauri (2010) reported that students scored higher in original thinking. High original thinking scores were also associated with being professionally active (Cocolas et al., 1997). Community-based pharmacists scored high on personal relations, cautiousness and responsibility, traits that seem logically related to managing a customer-focussed pharmacy (Cordina, Lauri, & Lauri, 2012). Given that the studies were conducted in different countries (Malta and the United States) and fifteen years apart, the discrepancies seen in students' original thinking scores could potentially be cultural or, like previous student findings (Adamson et al., 2003; Donohue, 1995), relate to professional socialisation through curriculum changes across time.

There are no reports in the literature specifically investigating personality characteristics in the rural or remote allied health workforce using a validated personality tool. There are a small number of descriptive and qualitative studies. Community connectedness was reported in successful Australian rural social workers and pharmacists (Allan et al., 2007), and a desire for excitement and adventure was thought to reduce length of retention of Australian dentists in remote areas

because they either move on, seeking further new experiences, or suffer from burn-out (Hall et al., 2007).

Using a qualitative methodology, Thomas and Clark studied 18 allied health professionals in remote areas of northern Australia in order to describe personal aptitudes perceived as valuable in managing remote practice (Thomas & Clark, 2007). The aptitudes identified were being organised yet flexible, cooperation and the ability to mediate, culturally sensitive communication skills, understanding of the community and the role, resourcefulness and resilience, and being a reflective learner.

A qualitative interview study (Manahan et al., 2009) of 26 'long term' allied health professionals in northern rural and remote Canada identified personal characteristics thought to be important for long-term retention. Participants were found to share an adventurous disposition both in personal life, e.g. love of the outdoors, and in professional life, including the love of variety and challenge. Additionally, a commitment to the community and the type of work and quality of life offered in the area was evident. The development of an identity as a 'northerner' illustrated their appreciation for the sense of belonging in the community. Participants reported key professional characteristics to be resourcefulness, independence, confidence and flexibility, in addition to managing dual roles, i.e. being comfortable with the overlap between personal and professional life in a small community.

No quantitative studies investigated the personal characteristics of remote AH professionals. However, the aptitudes reported in the qualitative studies appear to align with Cloninger's dimensions of Reward Dependence, Persistence, Self-directedness and Cooperativeness, and the Five Factor Model trait of openness. In turn, this seems to correspond with the high levels in these traits reported by Eley et al. (2008) and Jones et al. (2012) in relation to rural health professionals. Despite the limits of the extant literature, AH professionals' personal characteristics reflect a responsible, empathic image, with potential differences attributable to gender, maturation and professional socialisation. While comparisons among AH professions were difficult because of the scarcity of literature and diversity of measurement tools, there were indications that the person-technique orientation of the professions may be a useful framework for examining personal fit with work environment requirements.

2.3 Conclusion

This chapter has situated the research question in the literature. It firstly presented and analysed the motivation incentives influencing AH professionals in remote areas. It cautioned that positive intrinsic incentives contributing to job satisfaction may not be sufficient to compensate for the influence of negative extrinsic incentives that may contribute to workforce turnover. Then it moved onto the personality literature. Two key personality theories underpinning the methods used in this

thesis- trait theory and personal construct theory were detailed. Then it presented the research evidence demonstrating that personality does influence individual career choices and decisions, including in the health professions. Evidence in medicine suggested that personality contributes to decisions about both specialty choice and geographic location decisions. Evidence in the AH professions is extremely limited but does suggest there may be personality differences between professions and in AH professionals who choose to work in remote areas. Overall, there is a clear gap in the literature examining AH professionals' personality characteristics, particularly for AH professionals with an interest in, or experience of, the remote context. The intent of this study is to fill that gap. The next chapter will outline the methodology used.

Chapter 3

Methods

3 Methods

All research is interpretive and we face a multiplicity of methods that are suitable for different kinds of understandings. (Schwandt, 2000, p. 210)

3.1 Introduction

Having now reviewed the literature on personality and motivation, particularly in relation to career choice and work location, we will turn to the research design.

This research is a mixed methods study comprising two strands, Strand 1 and Strand 2, each of which offers a slightly different angle on the personality and motivation traits of allied health (AH) professionals, particularly in relation to working successfully in remote Australia. Strand 1 takes a quantitative positivist approach using a validated personality scale. The question asked in this strand is what personality characteristics are observed in AH professionals, including those with and without experience with working in remote areas, and whether there are observable differences among professions. Strand 2 uses Personal Construct Theory and its key technique, the repertory grid interview, to investigate how AH professionals construe themselves and others in relation to personality and motivation characteristics that contribute to success at work. In combination, these data will be used to look for convergent (or divergent) findings that can be applied to the overarching question of the personal characteristics of remote Australian AH professionals and their potential influence on recruitment and retention.

As a mixed methods study, this research is based on a pragmatist framework which allows the researcher to select the best methods for answering the research question, rather than being constrained by the limitations of a particular paradigm (Johnson, Onwuegbuzie, & Turner, 2007). Creswell et al confirmed this and highlighted the importance of mixed methods in facilitating new knowledge through embracing both qualitative and quantitative methodologies, suggesting that it 'transforms tensions [between different philosophical positions] through dialectical discovery' (Creswell et al., 2011, p. 4).

This chapter will first present an overview of the research design and the rationale for taking a mixed methods approach. This will include outlining the theoretical framework underpinning pragmatism, as well as examining the theories influencing the design, i.e. positivism and constructive alternativism. It will then describe the methodology for Strand 1 and Strand 2 in detail.

3.2 Influences on the research design

The methodology selected by the researcher is influenced by a number of factors: the question to be answered; the tradition of prior research in answering similar types of questions; and the epistemological perspective of the researcher, i.e. the researcher's beliefs and philosophical

assumptions about knowledge development (Creswell, 2014; Greene, 2007; Johnson & Onwuegbuzie, 2004). Robins et al (2007) demonstrated that the field of personality research invites methodological pluralism, adopting ‘a “by all means necessary” approach to research, using a wide range of approaches and techniques’ (p. 677). Their findings from an empirical overview of the designs published in prominent personality journals showed that while the common approach to personality research used a correlational design with self-report personality scales, many other designs, including quasi-experimental approaches, field and cross-cultural research, and group, twin and case studies, were used. Further, they found a wide array of assessment measures beyond the self-report scale, including informant reports, behavioural observations, cognitive approaches and biological markers (e.g. measures of autonomic arousal, DNA testing, neuroimaging). They concluded that personality psychology research was a ‘vibrant field, characterised by a rich array of methods and procedures’ (Robins et al., 2007, p. 677).

3.2.1 Defining mixed methods

Given the diversity of personality research designs, what does a mixed methods approach mean? At its most fundamental, there is general agreement that mixed methods designs integrate quantitative and qualitative data in the one study (Creswell, 2014; Gerring, 2012; Johnson & Onwuegbuzie, 2004; Johnson et al., 2007; Morse & Cheek, 2014). Greene (2007) offers a more nuanced definition, suggesting that mixed methods is a stance that creates an invitation for open dialogue about the ‘multiple ways of making sense of the social world, and multiple standpoints on what is important and to be valued’ (p. 20). Mixed methods researchers generally reject the purist approach observed in both qualitative and quantitative research cultures, where differences between methods and superiority of one over the other are adopted (Greene, 2007; Johnson & Onwuegbuzie, 2004; Onwuegbuzie, 2012). Thus, in a mixed methods investigation, the researcher must understand which design, from the diverse range available, will provide the most benefit in situating the investigation appropriately, and ensure credibility in answering the research question (Gerring, 2012; Johnson & Onwuegbuzie, 2004).

This research design adopts the stance proposed by prominent mixed methods researchers and authors, including Greene (2007), Creswell (2014) and Onwuegbuzie (2012), where the three traditions of quantitative, qualitative and mixed methods designs can all be ‘acknowledged for their utility and credibility’ (Onwuegbuzie, 2012, p. 195). To borrow from the definition of mixed methods research devised by Johnson et al, the purpose of the mixed methods approach is combining qualitative and quantitative approaches to gain ‘breadth and depth of understanding and corroboration’ (Johnson et al., 2007, p. 123). The use of more than one approach facilitates triangulation (Greene, 2007; Johnson et al., 2007) and is most appropriate when the research question cannot be fully answered by either the quantitative or qualitative approach alone (Leech & Onwuegbuzie, 2009).

The following sections will outline both the theoretical framework and the methodology underpinning this investigation.

3.2.2 Pragmatism as the epistemological perspective: A theoretical framework for mixed methods

As this is a mixed methods study, the underpinning theoretical paradigm or philosophical basis of this research is that of a pragmatist worldview (Creswell, 2014; Johnson & Onwuegbuzie, 2004; Johnson et al., 2007; Morgan, 2007). As explained by Guba and Lincoln (1994), a paradigm:

may be viewed as a set of *basic* beliefs ... a *worldview* that defines, for its holder, the nature of the “world”, the individual’s place in it, and the range of possible relationships to that world and its parts (p.107, original emphasis).

In terms of the advancement of knowledge through research, Morgan (2007) argued that the importance of these shared belief systems, these paradigms, is to ‘influence the kinds of knowledge that researchers seek and how they interpret the evidence they collect’ (p. 50). Acknowledging that beliefs guide practice, he argued that the paradigm shift from positivism to constructivism at the end of the twentieth century, does not have to result in research paradigms with ‘incommensurable kinds of knowledge’ (p. 62). So, while it is incumbent on mixed methods researchers to make their theoretical position explicit, there is room for diverse philosophical views (Creswell et al., 2011).

A pragmatic approach to inquiry emphasises shared meaning (Creswell et al., 2011; Morgan, 2007). For the pragmatist researcher, then, the key assumptions are to use ‘what works’, with an emphasis on employing multiple perspectives to focus on and understand the research problem, giving credence to both objective and subjective knowledge (Creswell, 2014; Creswell et al., 2011; Feilzer, 2010). Thus, pragmatism does not focus on methods *per se* but on solutions, facilitating researcher choice in regard to the methods or techniques that best answer the research question (Cherryholmes, 1992; Creswell, 2014).

In rigorous quantitative approaches, scientific reasoning is deductive – the data collection is designed to test the theory (Creswell et al., 2011; Guba & Lincoln, 1994). In comparison, rigorous qualitative approaches use an inductive approach – theory emerges from the data collected, and theory is developed. From the pragmatist perspective, scientific reasoning is abductive (Morgan, 2007), moving backwards and forward between theory and data and resulting in theories, or ‘the best explanation’, that can be assessed through action (Magnani, 2001, p. 20; Morgan, 2007). Therefore, analyses examine the data and its context, both qualitatively and quantitatively, in order to better understand and cast new light on the problem (Creswell et al., 2011; Johnson et al., 2007).

From an ontological perspective, the pragmatist acknowledges that objectivism is not possible, that knowledge is constructed, and therefore there is no single knowable external reality, i.e. truth does

not exist independently of the individual or their perception, and is not therefore easily measured (Cherryholmes, 1992; Johnson & Onwuegbuzie, 2004). In contrast, the positivist paradigm in quantitative research argues that truth is measurable and objective (Creswell et al., 2011).

Finally, the pragmatist approach differs from both purist qualitative and quantitative approaches in its consideration of the research findings. A critical factor for quantitative researchers is to state the generalisability of their findings, whereas the qualitative researcher needs to be clear about the context to which the findings apply. The pragmatist approach is to understand the transferability of the findings, by asking what can be done with the knowledge (Morgan, 2007).

3.2.3 Applying mixed methods to this research

Emerging as a research approach in the late 1970s, although originating in the work of Dewey and other early twentieth century pragmatists (Greene, 2007; Johnson & Onwuegbuzie, 2004; Leech & Onwuegbuzie, 2009), mixed methods studies have sometimes been referred to as integrative studies, multi-methods and mixed methodology (Teddlie & Tashakkori, 2011). Morse and Cheek (2014) recently called for a distinction between multiple methods projects and mixed methods design¹; however, the term generally favoured by eminent theorists is ‘mixed methods’ (Bryman, 2007; Creswell, 2014; Greene, 2007; Johnson et al., 2007; Onwuegbuzie, 2012; Teddlie & Tashakkori, 2011). As illustrated in Table 3-1, mixed method designs have been used across diverse fields.

Table 3-1: Research areas and examples of mixed methodologies

Area of research	Example literature
Health services research	Östlund, Kidd, Wengström, and Rowa-Dewar (2011); Weymouth et al. (2007)
Health care	Lichtenthal, Currier, Neimeyer, and Keesee (2010)
Education	Greene (2005)
Management	Modell (2010); Vaivio and Sirén (2010)
Psychology	Hanson, Creswell, Clark, Petska, and Creswell (2005)
Career development	Eley et al. (2012)

Teddlie and Tashakkori (2011) took a more detailed approach to the characteristics of mixed methods approaches. Their approach is shown in Table 3-2. The table first lists, then explains, each characteristic they ascribe to mixed methods studies. The final column demonstrates how each characteristic is applied in the research design in this thesis. As shown in Table 3-2, Strand 1

¹ Morse and Cheek argued that multiple methods studies comprised separate projects, each with separate questions attached to an overall inductive aim, whereas mixed methods comprised one project with components that are not complete in and of themselves. As Morse and Cheek’s article is recent, there has not yet been debate in the literature on whether to adopt this terminology. My research uses the term, mixed methods, as it is currently most commonly used.

and Strand 2 of the study both contribute in a complementary way to the research question. Further, the table demonstrates, as argued by Leech (2009) and Creswell et al (2011), that this study needed to use a mixed method design with both quantitative and qualitative strands in order to best answer the question and gain a more complete picture of potential solutions to the problem.

Table 3-2: Characteristics of mixed methods design applied to this thesis

Characteristic*	Explanation	Applied in this research as:
Methodological eclecticism	Mixed methods facilitate the use of methods likely to best answer the question	Quantitative self-report scale data from a large sample (Strand 1) Repertory grid interviews with a subset of Strand 1 sample, resulting in qualitative and quantitative data (Strand 2)
Paradigm pluralism	Researchers draw on multiple paradigms recognising that conceptual frameworks may not be mutually exclusive	Positivism (Strand 1) and constructive alternativism (Strand 2)
Emphasis on diversity at all levels	The diversity of mixed methods approaches may result in convergence or divergence of findings, both of which provide insight into the complexity of the particular research question and can direct further investigation	Diversity in methods and paradigms between Strands 1 and 2, which approach the same problem from different angles
Emphasis on continua (not dichotomies)	Utilises a range of options such as integrated research questions and innovative analysis methods, rather than forcing the researcher to choose between dichotomies such as exploratory or explanatory questions	Exploratory approach in Strand 1 using quantitative statistical analysis, coupled with innovative repertory grid data in Strand 2 using qualitative thematic and quantitative statistical analyses
Iterative, cyclical approach	Testing of predictions, theories and hypotheses in combination with in-depth investigation of the phenomena to generate theories or hypothesis	Seeking in-depth understanding of personality in remote AH professionals, which may provide insight into recruitment and retention in remote areas
Centrality of the research question	Focus on the problem (or question) to determine the best methods to employ	The problem: Recruitment and retention of AH professionals in remote Australia This research is investigating a new solution – understanding personality and motivation as a novel approach to addressing the problem The methods consider personality and motivation from multiple angles, using quantitative and qualitative methods
Draws from a set of basic research designs and analytical processes	Uses a recognised mixed methods design	Convergent parallel mixed methods design (QUAN+QUAL/QUAN) (Creswell, 2014)
Implicit tendency towards balance and compromise	Workable cooperative solutions to conceptual disputes are preferred over the purist approach of either qualitative or quantitative paradigms	Draws from the quantitative tradition with a positivist framework and the constructive alternativism framework

*Adapted from Teddlie and Tashakkori (2011, p. 287)

A number of theorists have advanced typologies to describe mixed methods design choices (Creswell & Plano Clark, 2011; Greene, Caracelli, & Graham, 1989; Hanson et al., 2005; Leech & Onwuegbuzie, 2009; Morgan, 2007; Teddlie & Tashakkori, 2006). Typologies are important

because they provide a recognisable structure, common language and guidance for advancing the field, thus increasing the credibility of mixed methods research (Leech & Onwuegbuzie, 2009). There is agreement that design choice or typology requires a decision about both the data type and the timing of data collection.

As described by Creswell, the typology for this study is a convergent parallel mixed methods design (Creswell, 2014; Creswell et al., 2011). This means both quantitative and qualitative data types are separately collected and analysed, and then the results are compared, looking for convergence (or divergence) of findings. Thus, the simplified description of the design for this study using standard mixed methods notation (Creswell, 2014; Morse & Cheek, 2014) is:

QUAN→QUAL/QUAN, where → indicates that the strands were conducted sequentially and indicates that equally weighted quantitative and qualitative data were collected simultaneously in Strand 2. Using capital letter notation also indicates weighting, with greater emphasis on the data notated in capitals than lower case. Creswell (2011) suggests that sequential designs can be helpful for a single researcher who does not have a pressing design purpose requiring concurrent data collection. In this research, although the Strand 2 sample was drawn from Strand 1, using a sequential design rather than a concurrent design was primarily a logistical decision. An elaborated figure outlining the mixed methods design is shown in Figure 3-1.

Convergent parallel mixed methods design

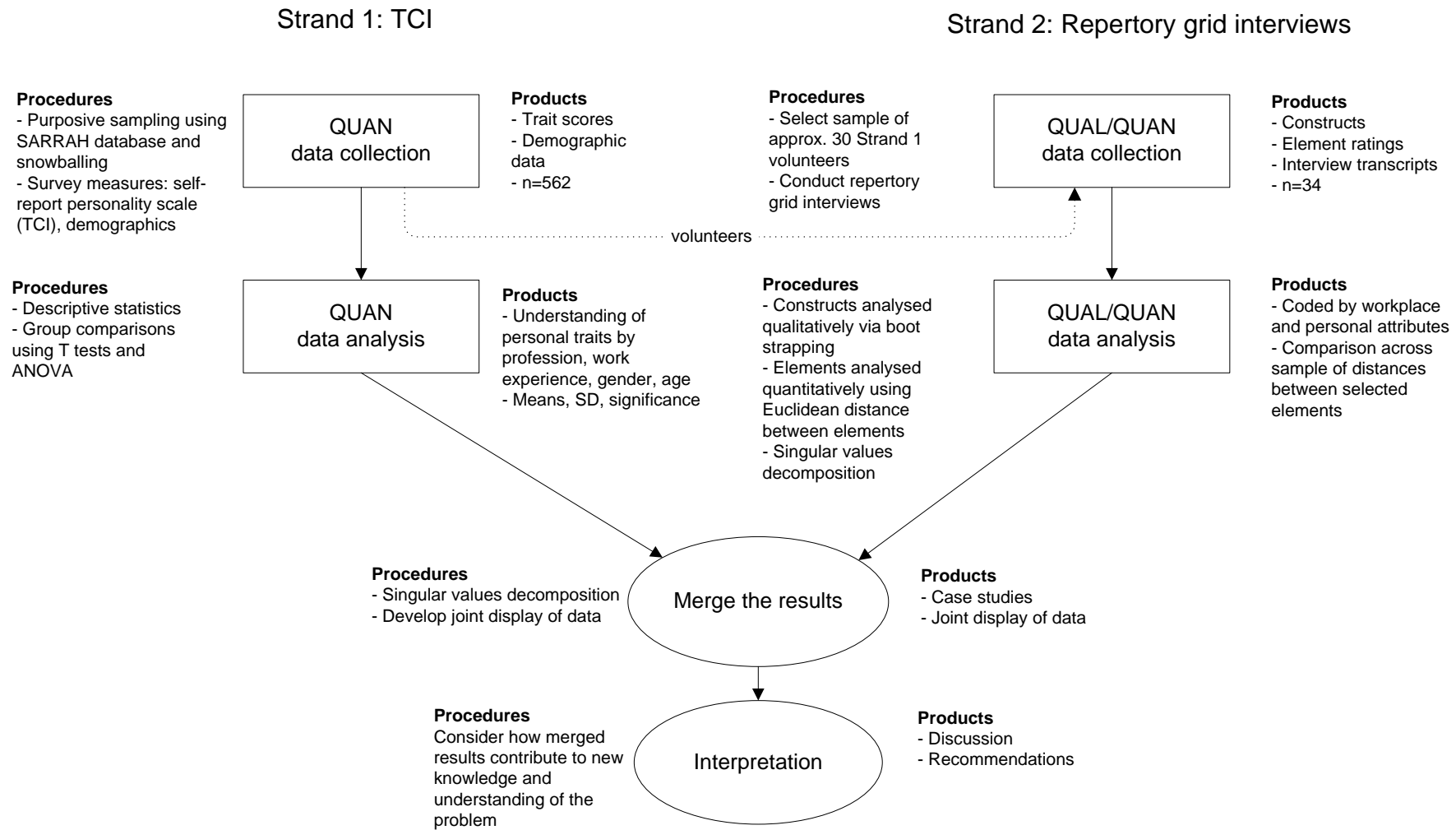


Figure 3-1: Research design for this study

Underlying this design is the assumption that the different data types, qualitative and quantitative, provide different types of information that better illuminate the problem (Curry, Nembhard, & Bradley, 2009; Johnson & Onwuegbuzie, 2004; Östlund et al., 2011). The same variables, personality and motivation characteristics in AH professionals, were investigated in both strands. As shown in Figure 3-1, the quantitative study forming Strand 1 sampled a large group of AH professionals, whereas the repertory grid study in Strand 2 collected both qualitative and quantitative data from a small subset of the Strand 1 sample. The analyses in Strands 1 and 2 were undertaken and will be presented strand by strand. Creswell (2014) refers to this as a side-by-side approach to analysis.

While some researchers have called for weighting or prioritising of either the qualitative or quantitative aspects of the design (e.g. Leech & Onwuegbuzie, 2009; Östlund et al., 2011), Creswell (2014) suggests rather that it is important to understand the intent of the design in answering the research question and to be clear about what each type of data contributes in order to integrate the findings. Data integration is an important final step in the data analysis and requires consideration of how the quantitative and qualitative data intersect, referred to as the 'point of interface' (Morse & Niehaus, 2009) or 'joint display of data' (Creswell, 2014, pp. 223, 230). It allows the researcher to compare or expand on the results. This may occur through merging the data in some way, building from one dataset to the other, explaining one dataset using the other, or embedding both datasets in a larger framework.

Thus, a mixed methods design provides a utilitarian approach to answering the research question. As a cross-sectional study, Strand 1 will undertake large-scale quantitative survey data collection using a recognised personality measure, the Temperament and Character Inventory (TCI) (Cloninger et al., 1994). As the data are nomothetic², it is expected that the results will show general trends in personal characteristics of the sample. In parallel, Strand 2 will use repertory grid interviews with a smaller sample to collect idiographic³ data that are both quantitative and qualitative, giving an in-depth picture from the perspective of those individuals. Each strand provides stand-alone data, interesting and valuable in its own right, with neither weighted more heavily than the other. Combined, they will produce a complementary and insightful view of the AH workforce perception of working remotely and the characteristics that contribute to success. Case studies and a joint display of data will be presented to integrate the data from both strands of the study.

² Introduced into psychology by Gordon Allport, nomothetic is from the Greek word 'nomos' (law) and signifies establishing generalisations or what is typical across cohorts or groups.

³ Idiographic is from the word 'idios' (private, own) meaning to reveal that which is unique to the individual.

3.2.4 Limitations and criticisms of mixed methods

The multiple strands of inquiry in mixed methods designs are a strength because together they ‘compensate for inherent method weaknesses, capitalise on inherent method strengths, and offset inevitable method biases’ (Greene, 2007, p. xiii) that can be present when using a single line of inquiry.

Despite this, it is important to anticipate possible methodological issues. It has been suggested that critical considerations and possible disadvantages of mixed methods include: time and resource use; teamwork considerations or single researcher familiarity with both quantitative and qualitative procedures; page and word limits for publication, despite the need to justify the procedures rigorously; sampling issues; and analytic/interpretive issues (Creswell, 2014; Creswell et al., 2011). Of these, a number are pertinent to this project. Strategies to moderate the impact of these limitations are outlined in Table 3-3.

Table 3-3: Mixed methods research limitations applied to this thesis

Limitation	Application	Moderate limitation by:
Time use	Strand 2 interviews likely to be time-intensive	Prioritisation of data collection Timely scheduling of interviews Information to participants about when they can expect return of transcript and grid results Judicious use of transcription services to avoid backlog
Familiarity with quantitative and qualitative procedures	Strands 1 and 2	Team comprises research student, plus one quantitative and one qualitative expert Expertise for Strand 2 additionally provided through contact with International Personal Construct Theory network email list Interaction <i>via</i> email with Professors Fay Fransella and Richard Bell, eminent published experts in repertory grid technique Visit to Professor James Grice, developer of Idiogrid™ software used to analyse Strand 2 data
Sampling issues	Strands 1 and 2	Defensible sampling frame Sample size adequate in both strands Ensuring comparability of samples across strands for purposes of interpretation and integration of results Sections 1.4 and 3.3.2 address this in detail
Analytic and interpretive issues	Strands 1 and 2 – may occur if findings are divergent rather than convergent	Final discussion to integrate Strands 1 and 2 findings and suggest further avenues for investigation if divergence found

Having now substantiated mixed methods as a sound methodological choice, and before moving into the next two sections which describe the details of Strand 1 and Strand 2, it seems appropriate

to conclude with a quote from the Personal Construct Theory literature. It highlights the contributions of different approaches to answer a research question that aims to investigate AH professional personality from two perspectives: what AH professionals are like; and how they construe themselves.

All the different theories of human nature that we encounter can be seen as different constructions, and our task is not to try to discover which one is the 'correct' one, but to examine the usefulness of each in helping us understand the nature of people. (Butt & Burr, 2004, p. 3)

3.3 Methodology Strand 1: Quantitative

As shown in the literature review, a large project investigating the personal trait and motivation characteristics of novice and experienced Australian AH professionals using a validated personality tool has never been done before. Therefore, it was important to select a research tool that both met the purpose of the study, and allowed links with related research on workforce characteristics in areas of geographic need.

Strand 1 data collection was *via* an on-line survey. Fraley (2007) offers many justifications for use of the internet for personality research: reducing the administrative load of data collection; facilitating access to geographically dispersed populations; and reducing pressure on individuals to consent and participate. In keeping with Fraley's guidelines, the first page of the questionnaire comprised the information sheet and informed consent.

The survey included purpose-designed questions for the demographic variables as well as a widely-validated self-report personality scale, the Temperament and Character Inventory Revised 140 (Cloninger et al., 1993). This scale will now be referred to by its acronym, the TCI. (See Appendix 1 for TCI subscale example questions.)

3.3.1 The materials – an online survey

3.3.1.1 The demographic data

Given the dearth of comprehensive data on allied health professionals, it was important that the variables included in the demographic section of the survey capture accurate information to allow the comparison of variables, such as rurality of work experience, with the TCI results. Most questions were multiple choice. All variables had been previously described in the literature as likely to influence decision-making in regard to work location.

A map of Australia showing the remoteness area classification (Department of Health and Ageing, 2009) and examples of remoteness area locations were provided with the questions on remoteness of work location.

The demographic section included the following variables:

- Gender
- Year of birth
- Profession, current professional role
- Current work location, length of time in current work location, intended length of stay in current work location, live-in or fly in/fly out relationship to current work location
- Experience in a remote location
- Year of graduation, country of qualification, rural or urban university location, rural student placement experience
- Rurality of participant's childhood years, adult years
- Partnered, rurality of partner's childhood years, adult years
- Dependants, number, ages
- Ranked influence of three factors (personal, professional and organisational) on staying in or moving from current location
- Self-assessed suitability to and preference for working in a remote area.

The demographic section of the survey was piloted with ten AH professionals prior to submission to the ethics committee. The pilot participants were purposively selected to reflect the range of professions. Only minor changes such as question order were required as a result of feedback from the pilot study.

3.3.1.2 The personality measure: The Temperament and Character Inventory-R140

The TCI (Cloninger et al., 1994) is a 140-item self-report measure providing scores for seven personality dimensions – four temperament dimensions and three character dimensions. Each of these dimensions was described in the literature review presented in chapter 2, section 2.2.2. In particular Table 2-3 provided a full description and behavioural indicators seen in people with high or low levels of each dimension.

Six of the TCI dimensions are assessed with 20 items. Self-transcendence is assessed with 16 items. The TCI uses a five-point Likert scale from “Definitely false” through to “Definitely true”. It is a shortened version of the full 240-question TCI-R (Cloninger et al., 1994), providing reliable measurement of the dimensions for research use but requiring less time to complete. The inclusion of four validity questions checks whether the participant is reading each question or answering randomly, e.g. question 36: “Please mark the fourth circle”. Total time estimated for completion of the survey was 30-40 minutes.

The TCI was selected for three reasons. Firstly, unlike other models of personality which are purely theoretical, it uses a biopsychosocial theoretical base (Cloninger, 2000; Cloninger et al., 1994; De

Fruyt et al., 2000; McCrae & John, 1992). As reported in the literature review, from a theoretical standpoint, Cloninger (1993) argued that the biopsychosocial model accounts for the interplay between brain structure and organisation with the environment throughout development, thus emphasising that an individual's behaviour results from interaction between genetic and environmental factors. He contended that the underlying biological and social determinants of personality must be considered, rather than solely relying on factor analysis of behaviour (Gillespie et al., 2003). The model provides a measure of the dynamic personality configuration of healthy people as well as those with personality disorder (Cloninger, 2000; Cloninger et al., 1993).

Furthermore, Cloninger's seven dimensions of personality are related empirically to the Five Factor Model of personality with high correlations to all Big Five traits⁴ and demonstrated better performance in predicting behavioural acts and clinical indicators of maturity (Grucza & Goldberg, 2007). While the Five Factor Model provides the basic dimensions of personality and makes an important contribution to understanding personality (McCrae & John, 1992), the TCI was considered preferable for this study because its neurobiological basis accounts for temperament (innate, heritable) and character (modifiable, based on learning) dimensions. Likewise, it was also considered more appropriate than other self-assessment personality type indicators, such as the Myers-Briggs Type Indicator, due to psychometric limitations and poor predictive validity (McCrae & Costa, 1989; Pittenger, 2005).

Secondly, it has been widely validated throughout the world (Grucza & Goldberg, 2007; Parker et al., 2003). Since 1993 when it was first published, numerous studies have used the TCI to examine the personality profiles of specific populations including nationalities (Brandstrom et al., 1998; Fossati et al., 2007; Parker et al., 2003) and professions (Eley et al., 2008; Kluger, Laidlaw, Kruger, et al., 1999; Vaidya et al., 2004), including Australian health professionals (Ball et al., 2014; Eley et al., 2011; Eley et al., 2009a), and the influences on personality of other factors such as birth season (Chotai, Forsgren, Nilsson, & Adolfsson, 2001).

Thirdly, its application to AH professionals complements and builds on recent use in other sectors of the Australian rural health workforce (previously described-for example, Ball et al., 2014; Eley et al., 2014; Eley et al., 2011; Eley et al., 2009b).

3.3.2 Sampling method

From the outset it was known that the sampling strategy would be challenging, given that the project was a national study inclusive of many AH professions, rather than focussing on a single AH profession. It was therefore important to find a method that, as far as possible, facilitated broad and representative sampling. Numerous reports and studies attest to 'fragmented [AH] datasets'

⁴ The five factors most commonly acknowledged are Extraversion, Neuroticism, Conscientiousness, Agreeableness and Openness (Ebstein, Bachner-Melman, Israel, Nemanov, & Gritsenko, 2007) and operationalised through measures such as the NEO Personality Inventory (Lamiell, 2000; McCrae & John, 1992)

(Mason, 2013, p. 74), and so the difficulty lay in developing a sampling strategy that accounted for the professions considered to be AH (Australian Government Department of Health and Ageing, 2008; Australian Institute of Health and Welfare, 2013b; Health Workforce Australia, 2014; Keane, Smith, Lincoln, Wagner, & Lowe, 2008; Lowe, 2007).

A random sampling strategy drawing from a comprehensive national database of AH professionals was the preferred strategy (Creswell, 2014), although this proved impossible as no such database existed. The viability of the databases investigated and the strengths and limitations of each are shown in Table 3-4.

Table 3-4: Databases considered in development of sampling strategy

Database	Viability	
	Accessibility	Limitations
Australian Health Practitioner Regulation Agency (AHPRA)	Not possible as database did not exist at time of data collection	Not all targeted AH professionals registered through AHPRA
Professional Association for each profession (and/or registration boards for registered professions)	By agreement and payment of prescribed fees (e.g. \$450 (Private communication, Dietitians Association Australia))	Access to multiple databases required – one for each profession Databases incomplete as membership in professional association is not mandatory Expensive
Government health departments in each Australian state or territory	Limited capacity of human resource divisions to identify individuals by profession; e.g. a dietitian may be temporarily in a policy role and so not identified as AH (R. Moore, Northern Territory Department of Health, personal communication, Dec 12, 2009)	Seeking permission from each department would be very time-intense and potentially involve prolonged negotiations with no surety of success
Hand-searching of Yellow Pages and internet for private providers	Possible but labour-intensive	Excludes publicly employed AH professionals
Services for Australian Rural and Remote Allied Health (a peak AH professional body)	Membership and scholarship holder database	Membership is voluntary but open to AH professionals with an interest in rural and remote health services

The Services for Australian Rural and Remote Allied Health (SARRAH) database was considered the most appropriate for obtaining a representative sample (Sarantakos, 2005) because it optimised participation by AH professionals working in rural and remote Australia. As SARRAH is a grass-roots organisation, membership is open to AH professionals working in or with an interest in health service provision in rural and remote Australia. Additionally, their database included key contacts within government health departments and AH professionals who were current or past rural and remote scholarship holders. Further, previous work had successfully sampled through SARRAH using a snowball approach (Beattie, 2009; Fitzgerald et al., 2000), demonstrating the viability of this approach. Finally, SARRAH were willing to partner in the data collection.

Drawing on the pragmatist framework, the convenience sampling method, with the addition of snow-balling sampling, was developed. The limitations of the available AH data shown in the introduction and the databases in Table 3-4 are evidence of the difficulty in setting a sampling frame. As argued by Sarantakos (2005), snowball sampling is a sound strategy to use when there is 'a lack of sampling frames, when the target population is unknown, or it is difficult to approach respondents in any other way' (p166). While the addition of snowballing make it difficult to estimate a response rate, this issue is acknowledged as a methodological limitation.

3.3.3 Distribution of the survey

Both the SARRAH Board and Executive Officer were supportive of the research, provided a letter of agreement and accepted the University of Queensland Ethics approval. They circulated, at no cost, an electronic invitation to participate through their database and networks. Emails invited participation in the research and requested the recipient to forward the invitation through their AH networks. The survey opened on 13/10/2010 and closed on 5/4/2011. During this period two reminder emails were sent.

3.3.4 Data collection and informed consent

The survey was made available through SurveyMonkey™, a secure, encrypted web-based survey solution site, accessible to participants *via* a hyperlink provided in the circulated invitation to participate. The first page of the survey included participant information and consent, and stressed anonymity, unless the participant requested the return of their personalised TCI profile and its interpretation, or expressed interest in participating in Strand 2. In accordance with ethics requirements, data confidentiality was managed using password-protected electronic storage and anonymous data collection, except for those participants who provided contact details as described.

The data from SurveyMonkey™ were available for direct export as a Microsoft Excel spreadsheet, eliminating potential error from manual data entry.

Collection of data using an online environment has been recognised as both legitimate and expedient (Fraley, 2007).

3.3.5 Data cleaning

Cleaning and scoring of the TCI was undertaken in Microsoft Excel 2010. Data cleaning included identification of duplicate, incomplete or ineligible records. Table 3-5 displays the results of the data cleaning and shows that of 651 records entered into SurveyMonkey™, 562 were eligible for analysis. Given the length of time to complete the survey, this was considered an excellent result.

Table 3-5: Summary of data cleaning results

Data cleaning task	Number of records
Total SurveyMonkey records	651
Records removed: Duplicate	11
Records removed: Ineligible profession	11
Records removed: Incomplete Temperament and Character Inventory*	67
TCI complete (validity questions and $\geq 137/140$ items answered)	562**

*records excluded if less than 137/140 TCI questions answered or more than half of the four validity questions omitted or failed

** NB: one eligible record was found after publication of the first paper (originally excluded due to the respondent not naming the profession). The profession was later discovered to be imputable from the free text response in the demographic motivation question.

Scoring of the TCI was managed using procedures and Excel formulae provided by the research laboratory of the TCI developer (Professor C Robert Cloninger).

3.3.6 Data analysis

Demographic data and TCI trait scores were exported from Excel into IBM SPSS Statistics version 19 (SPSS Inc., Chicago, IL, USA) for analysis following the development of a code book to enable consistent data management. The codebook contained the numeric codes assigned to each response and was updated when variables were re-coded for analysis purposes.

Statistical analysis was descriptive of the whole sample. Initial exploration of the variables indicated normal distribution (Kolmogorov-Smirnov statistic, normal quantile-quantile plots).

Comparative analysis was performed between groups, analysing levels of temperament and character traits based on the demographic variables of interest (gender, age, profession, rurality of background, work location). This used independent samples *t*-test, ANOVA and subsequent two-way ANOVA with 95% confidence level for measuring differences between variables (*post hoc* comparisons using Bonferroni test); the effect size used *eta* squared.

3.3.7 Strand 1 rigour, reliability and validity

Rigorous personality research within an empirical framework allows for generalisability of the results beyond the sample, i.e. the sample reflects the attributes of the population (Fernandes-Taylor, Hyun, Reeder, & Harris, 2011; John & Soto, 2007; Sarantakos, 2005). Study rigour is therefore affected by the sampling frame, as well as the reliability and validity of the measure selected. Methodological decisions regarding the sampling frame have been discussed in detail earlier and will not be re-iterated here except to say that, despite its limitations, the snowball sampling method through the peak body for rural and remote AH professions was considered a

sound approach, given the complexity of the AH workforce (Health Workforce Australia, 2014; Sarantakos, 2005).

Despite the limitations of self-report instruments, e.g. the possibility of socially desirable responding and acquiescent responding (Boyle, 1995; Paulus & Vazire, 2007), the TCI has been widely used, and has extensive construct validation and published normative data, as discussed earlier. These confirm its use as a validated, practical and credible tool for investigating personality. Further, the Cronbach alpha, the index of choice for internal consistency in personality research, of the TCI scales ranged from 0.76 to 0.89, which is considered good (John & Soto, 2007, p. 463).

In summary, this section has described and justified the methodology for Strand 1. The next section will focus on the methodology for Strand 2.

3.4 Methodology Strand 2: Qualitative/Quantitative

Man creates his own ways of seeing the world in which he lives: the world does not create them for him. (Kelly, 1955a, p. 12)

Strand 2 of this research used a unique methodology, the repertory grid interview. As a structured interview, a repertory grid interview collects both qualitative and quantitative data (Fransella et al., 2004).

This section commences with a reminder of the theory, Personal Construct Theory, underpinning repertory grid technique. It includes a full description of the interview design before moving into participant recruitment and conduct of the interviews. It concludes with an explanation of the data analysis and discussion of the reliability, validity and integrity of the method.

3.4.1 Personal Construct Theory and repertory grid technique

The second round of data collection, Strand 2, was designed as a repertory grid study. The repertory grid interview developed by George Kelly, originally known as the reptest (Slater, 1977a) and developed to explore self-concept, was the key data collection tool for his Personal Construct Theory (Kelly, 1955a) The value of a repertory grid interview is its ability to 'show directly the informant's state of mind at the time of the interview' (Slater, 1977d, p. 128), thus revealing how that person construes, or makes sense of, the topic of the interview (Jankowicz, 2004). The personal constructs that are elicited in the repertory grid interview can thus be said to form the individual's personal construct system on that topic (Fransella et al., 2004). Neimeyer (1992) described the insight gained through using the repertory grid interview as providing 'an ethnographic and phenomenological assessment' from the individual's perspective (p166).

Despite being developed more than 50 years ago, both the technique and its theory remain germane to modern researchers and clinicians (Winter, 2013). A recent bibliometric review

reported extensive application of the repertory grid interview (Saúl et al., 2012). It found 973 discrete publications in 13 languages, published between 1998 and 2007, underscoring the relevance of the grid as a tool for investigating personal construct systems, despite the time and technical expertise required to administer it.

Examples of relevant research using repertory grids include role construing at work (Österlind, 2011), effectiveness at work (Wilson & Retsas, 1997), clinical teacher characteristics (Chitsabesan, Corbett, Walker, Spencer, & Barton, 2006), clinical reasoning (Kuipers & Grice, 2009), career counselling (Neimeyer, 1992), police force work culture (Dick & Jankowicz, 2001), business training needs analysis (Magna, 2010) and beliefs about medication adherence (Cottrell, 2010).

Fransella et al (2004) in their manual on repertory grid technique, provide a detailed guide to designing a repertory grid study, outlining the key components as the topic, the constructs, the elements and the ratings. Thus, the repertory grid interview is a structured interview on a *topic*. In this study the topic was the personality and motivation characteristics of AH professionals that are required in the workplace and contribute to success. Fransella et al further explain that the data generated by the interview reveal the participants' construing or beliefs on this topic, and that these beliefs are contained in *constructs* or statements of personal understanding provided by the participant. The *rating scale* allows systematic comparison of the constructs across *elements* (Fransella et al., 2004). Elements can be people, jobs, processes, or anything that can be meaningfully compared and that is relevant to the topic (Dick & Jankowicz, 2001). In this study, the elements were work-roles that AH professionals could hold or had held. This point will be explained in detail in Section 3.4.2.1. The interview itself is recorded on a matrix or *grid*; hence the name, repertory grid interview. An annotated example of a grid is shown in Figure 3-2, depicting the elements recorded along the top row, the constructs recorded down the outside columns, and the ratings recorded in each of the centre cells. Note how the two construct columns represent two ends of a continuum for that construct. More detail will be provided about this under construct elicitation (See Section 3.4.2.2).

	<i>Current</i>	<i>Ideal</i>		<i>SucRemote</i>	<i>HospitalOther</i>	
Holistic approach	4	2		2	2	Specific condition approach
Results-oriented	2	5		4	3	Patient-centred
Hierarchy in team	3	5		5	4	Team members valued
Generalist expertise	3	2		2	3	Detailed specific expertise
Empowering	2	1		1	3	Judgemental

Figure 3-2: Example of a grid showing elements, constructs and ratings

3.4.2 Data collection: Interview design

In designing a repertory grid research study, the researcher must consider each of the key components in order to ensure the data collected will answer the topic question (Fransella et al., 2004; Jankowicz, 2004). Rigorous design therefore requires decisions about:

1. Element selection
2. Construct elicitation
3. The rating scale.

Each of these components will now be detailed to show how the study design addressed the topic or research question: How do AH professionals construe themselves and others in relation to working successfully in remote or urban areas?

3.4.2.1 Element selection

Elements are the instances or exemplars of the topic which are compared with each other (Kelly, 1955a). Each grid has a set of these. The set of elements for this study are shown in Table 3-6. From the participant's perspective, the elements must be easily understood. This allows them to systematically compare elements in order to generate a number of constructs about them, ensuring that the interview produces rich data on the topic (Jankowicz, 2004). From the researcher's perspective, the elements need to be representative of the topic being investigated (Bell, 2003; Kelly, 1955a).

As the study aimed to look for patterns across participant grids, the elements also needed to be common across all grids (Fransella et al., 2004; Kelly, 1955a). In keeping with Kelly's original repertory grid design, the elements were therefore provided to participants as role titles (Bell, 2003), as shown in Table 3-6. Meaningful exemplars of all role titles were then negotiated with the participant and recorded using initials on the repertory grid form.

Although Kelly himself used 24 elements, far fewer are acceptable (Fransella et al., 2004). Twelve elements were selected for this study, of which six elements related directly to the participant (self-roles such as ‘Myself as I am currently’) and six elements related to other AH professional roles or individuals (such as ‘Novice remote practitioner’). Eleven were AH professional role titles or potential work locations, and one represented the participant’s ‘ideal’ job. In particular, the *Ideal* element acted as the standard for assessing the validity of each participant’s responses, as it represented the individual’s aspirations and hopes for work (McDaniel & Grice, 2005). Ratings for the *Ideal* should be mostly positive; otherwise, the participant is suspected of rating randomly rather than genuinely (Fransella, 2005, p. 45).

Table 3-6 shows the elements, along with the abbreviations used throughout the remainder of this thesis. For readability, italics are used in the text when referring to elements.

Table 3-6: Element labels and their abbreviations

Element title used in grid	Abbreviation for text and tables	Abbreviation for figures and charts
Myself as I am currently*	<i>Current</i>	Current
Myself in my ideal job*#	<i>Ideal</i>	Ideal
Myself in a previous job*	<i>Previous</i>	Prev
Myself in a hospital job*	<i>HospitalSelf</i>	Hosp
Most successful remote practitioner	<i>SuccessfulRemote</i>	Suc.Remote
Novice remote practitioner	<i>NoviceRemote</i>	Nov.Remote
Successful urban community health practitioner	<i>UrbanCommunity</i>	Urb.Comm
Successful private practitioner	<i>Private</i>	Priv
Someone else in a hospital job	<i>HospitalOther</i>	Hosp.Other
Myself in my next job*	<i>NextJob</i>	Next job
AH professional I consider a role model	<i>RoleModel</i>	Role model
Myself in a position I wouldn’t like*	<i>Position not liked</i>	Pos. not liked

*Self elements

Characteristics or attributes valued in a work role

While the set of elements was designed to be meaningful for all participants, it was anticipated that occasional instances of an element might not be applicable to a particular participant (Jankowicz, 2004, pp. 12,13), or outside the range of convenience⁵. For example, a participant intending to retire in the near future may not have a *NextJob*. In this instance, the element was omitted from the

⁵ The range corollary described in Table 2.5 in the literature review is a reminder that constructs operate within a context, their ‘range of convenience’, such that they may not necessarily be applicable to all elements.

interview and noted as missing data. In a similar way, novice participants in their first job were asked to nominate student placements as their *Previous* or *HospitalSelf* element. If a participant had no personal experience with a particular type of position, they were asked if they could imagine the work that might be done in, and the demands of that particular setting. For example: “Can you picture the type of work that a social worker might do if they were working in a town like X?”

Directing the participants to picture the elements is a sound application of Personal Construct Theory and constructive alternativism and does not compromise the rigour of the data (Fransella et al., 2004). The premise of Personal Construct Theory is that people make meaning out of their world (Butt & Burr, 2004; Jankowicz, 2004; Kelly, 1955a), and in making meaning, the construction corollary⁶ accounts for anticipation of events that might not have been personally experienced (Fransella et al., 2004, p. 18). An example applying this practically would be that when an AH professional applies for a job they are making choices about the type of work and its location, based on their preferences and their understanding of what the work will require. An individual's decision about a particular type of work or role, and their subsequent choice to pursue employment (or not), is always made on the basis of their current construing of working and living in that area. Whether their construing is based on personal experience, up-to-date knowledge, or misinformation, it will still inform their decision. Therefore, asking the participant to ‘imagine’ what the position would be like is a credible approach to uncovering their current construing about those particular element(s). Butt and Burr (2004, p. 2) confirm this by emphasising that an individual's constructs are best judged in terms of their usefulness in guiding behaviour rather than in terms of truth or correctness.

3.4.2.2 Construct elicitation

The most common method for eliciting constructs, ‘triadic presentation’ (Bell, 2003, p. 98), has been shown to elicit constructs that discriminate well between elements (Caputi & Reddy, 1999). In triadic presentation, the participant compares three elements at a time, describing similarities and differences between those elements. The differences and similarities elicited are their constructs, the ‘discriminations made between people, events or things’ (Fransella et al., 2004, p. 18). The practical application of managing this process is described later in Section 3.4.4. The process of using triadic presentation in the virtual interview room used for this thesis will be described in more detail in Section 3.4.4.

⁶ The construction corollary (Table 2.5 in the literature review) demonstrated the interaction between elements and constructs such that our personal constructs facilitate anticipation of things not experienced, including future events.

Comparing elements in terms of similarity and difference ensured that participants provided constructs that were bipolar (Kelly's dichotomy corollary⁷ (Fransella et al., 2004; Jankowicz, 2004; Kelly, 1955a). Thus, they were on a bipolar continuum where the similarity construct was at one end of the continuum and the difference construct was at the other end of the continuum. This was illustrated in Figure 3-2 shown earlier where the constructs are written in two separate columns at the far left and the far right of the figure.

The decision to elicit, rather than provide, constructs for participants to rate was based on Kelly's corollary of individuality⁸ (Kelly, 1955a) which respects that elements may be construed differently between individuals (Adams-Webber, 1970).

3.4.2.3 Rating scale

In a repertory grid interview, ratings reveal the relationship between constructs and elements (Bell, 2003). Kelly's original grid technique used only a two-point rating scale. In this study, as is common practice, a five-point scale was used (Bell, 2003; Jankowicz, 2004). Participants rated each element on each construct after it was elicited.

In keeping with advice from Jankowicz (2004), cells were left blank and considered missing data if the participant was unable to rate a particular element on a certain construct. This may occur if the construct falls outside the range of convenience for that element (Fransella, 2003). For example, a construct, 'wears long skirts to be culturally appropriate', would be outside the range of convenience for elements that were male and therefore unable to be rated. Detail about how the analysis dealt with missing data will be provided in Section 5.3. Using a common set of elements rated on the same scale provided sufficient matching between grids to facilitate analysis that compared across grids (Jankowicz, 2004; Slater, 1977c).

3.4.2.4 Number of grids to administer

The research aimed to administer sufficient grids to sample remote and urban AH professionals across a variety of professions. It was intended that the Strand 2 sample reflect the demographic characteristics, including spread across professions, of the sample from Strand 1. It particularly intended to compare the construing of urban novices with that of remote novices, given that novices are likely to be in the process of formulating career plans and are often considered potential recruits for remote positions (Miles et al., 2006). Experienced urban AH professionals were not included in Strand 2 because they were considered less likely to be available for

⁷ See also Table 2.5 in the literature review chapter

⁸ See also Table 2.5 in the literature review chapter

recruitment to remote areas, given the extensive information available about life factors influencing career decisions (Keane et al., 2012). Further research could test this assumption.

Given the reports in the literature that repertory grid interviews take between one and two hours to administer (Dick & Jankowicz, 2001; Saúl et al., 2012; Smith, 2000), with each interview generating a minimum of six constructs for each of twelve elements, it was decided to recruit approximately 30 participants. This was considered a realistic, cross-sectional sample that would generate a useful dataset of qualitative and quantitative data for analysis (Jankowicz, 2004). The sample planned was:

- 10 novice AH professionals currently providing services in areas classified as RA4 or RA5 (remote or very remote Australia respectively)
- 10 experienced (more than five years) AH professionals currently providing services in areas classified as RA4 or RA5 (remote or very remote Australia respectively)
- 10 novice AH professionals currently providing services in areas classified as RA1, RA2 or RA3 (major cities, inner regional, outer regional Australia respectively).

3.4.3 Sampling method

This strand of the research design used purposive sampling. As detailed by Sarantakos (2005, p. 164), in purposive or quota sampling, the participants are judged by the researcher to be able to contribute relevant data to the research question. Thus, the researcher considers the significant dimensions of the population to ensure those dimensions are represented in the sample. This type of sampling is particularly useful when the sample is small, or in qualitative research when the intensity of the data collection prohibits large samples and the question can be explored with a smaller purposive sample (Creswell, 2014; Sarantakos, 2005). In this research, participants met the project's suitability criteria because of the insight they could provide (Creswell, 2014; Sarantakos, 2005).

Participants were selected from the pool of AH professionals who had undertaken the Strand 1 survey and volunteered further participation by providing contact information. This allowed selection of a balanced sample in terms of demographic variables, with a range of professions, gender, age groups, levels of experience and rurality of work locations (specifically urban-based or remote). Additionally, a small number of novice urban-based participants were recruited by snowballing from participants. Selected volunteers were contacted by phone to ascertain their current interest and capacity to participate. Information about the time demands and requirements of the interview process was given. A follow-up email containing study information and written consent forms was then sent.

3.4.3.1 Development of virtual meeting room and interview procedures

The geographic spread of participants across Australia and the very remote location of many of them precluded face-to-face interviews due to time and travel costs. The repertory grid interview requires joint focus of attention by both interviewer and participant on the repertory grid form, i.e. both interviewer and participant have to be able to view and write on the form in real time. This requirement precluded telephone-only interviews, and prompted the development of a virtual interview room.

Repertory grid interviews have been conducted remotely using purpose-designed software or virtual meeting rooms without compromising data quality (Grice, 2002; Magna, 2010). Additionally, the qualitative research literature suggests that online and telephone interviews can be successful if designed with care (Berg, 2001; King & Horrocks, 2010).

Therefore, in designing a virtual interview, the following factors were considered:

- Ability to establish rapport in a virtual environment
- Familiarity of participant with computers, including ability to access and install new software
- Participant access to equipment, i.e. internet-enabled computer and telephone
- Internet bandwidth available to participant
- Security/privacy of interview environment.

A principle was established that the interview environment solution should be as familiar as possible to participants and therefore less daunting or distracting. Purpose-designed repertory grid software, for example, Idiogrid (Grice, 2002) or GRIDCOR (Feixas & Cornejo, 2002), was explored but rejected in favour of using a Microsoft Excel 2010 spreadsheet guided by the interviewer in a virtual meeting room. The projected advantage of Excel over the purpose-designed software was its likely familiarity to participants, thus allowing the early stages of the interview to proceed more quickly with less time required for orientation to the software itself. Additionally, it contained all the participant's interview data on one screen, rather than needing to navigate through a program and across screens as the interview progressed. This facilitated interviewer reflection on the data as they were elicited, and allowed easy cross-checking by the participant if they changed their mind on construct wording or ratings.

Conducting the interviews virtually required software to host the virtual meeting room. This software was managed from the interviewer's computer and made available to the participant through screen sharing.

The initial software of choice for screen sharing was Adobe Connect. The advantages of Adobe Connect were ready researcher access, previous successful experience with its use, advance bookings of meeting rooms and a password-protected secure environment. Although Adobe

Connect could also record audio, it was considered likely that participants in remote areas would not have sufficient internet bandwidth to provide good quality video and audio. The telephone was therefore used for sound. A small inline Trillium™ telephone recording adaptor was connected between the phone line and a digital recorder to audio-record the interview with participant consent. Figure 3-3 illustrates the equipment set up for both interviewer and participant in the virtual interview room.

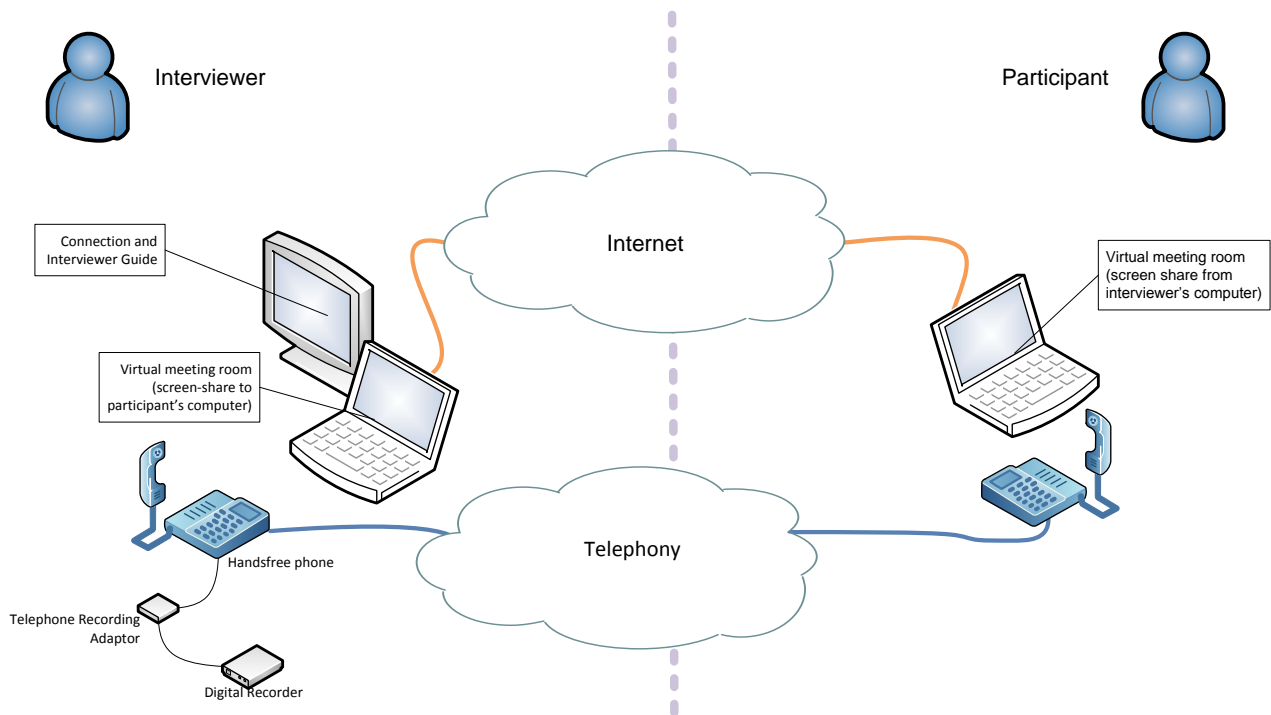


Figure 3-3: Schematic representation of the virtual interview room

A protocol for the interview process was developed and piloted in three interviews (one face-to-face and two online). The pilot provided confidence in using repertory grid interview techniques to elicit information, allowed practice in refining explanations about the process and eliciting constructs, and tested the actual equipment setup and use. The protocol to design and standardise the collection of repertory grid data is shown in Figure 3-4.

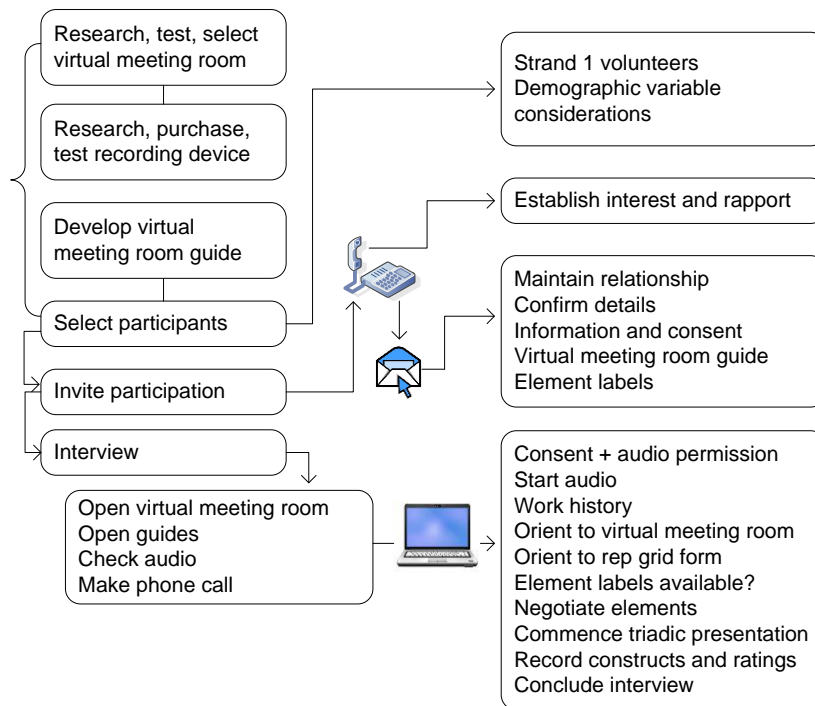


Figure 3-4: Protocol for standardising the repertory grid interview data collection

The wording of the question was carefully considered and included on the repertory grid form as a prompt. It was recognised that overlap occurs between personal characteristics and characteristics demanded or dictated by the work setting, such as the need to work within rigid boundaries, for example; so, the decision was made to accept constructs describing either personal or work environment characteristics.

3.4.3.2 The pilot

Three pilot repertory grid interviews were undertaken. One was face-to-face and two used Adobe Connect in order to test the virtual meeting room. Piloting the interviews facilitated refining the interview questions and the specific requirements of the interview techniques, refining the instruction sheet for the virtual meeting room, and testing of the audio-recording equipment. The length of time for the pilot interviews was used to guide the scheduling of the first participant interviews. Data from the pilots were not included in the analysis.

3.4.4 Eliciting interviews

The interview protocol (Figure 3-4) was used. Once rapport was established and the computer screen sharing had been tested, the components of the grid were explained. This included negotiating the elements (work roles) and explaining the construct elicitation process. Constructs were elicited using standard triadic difference technique,⁹ which Caputi and Reddy (1999, p. 261) argued results in constructs that are more meaningful and cognitively complex, and discriminate

⁹ Note that the usual way to do this is to ask the participants 'How are two of these the same and different from the third?' (Jankowicz, 2004). See also Section 3.4.2.2

better between elements. In practical terms, using triadic presentation meant that the researcher selected three elements and asked the participant to describe how two of the elements were similar to each other but different from the third. The construct elicited as defining a similarity (similarity pole) was recorded in the column on the left side of the repertory grid interview form while the difference (or opposite) was recorded on the right side (contrast pole).

It is important to note that the triadic presentation had to be managed by the participant with only verbal assistance from the interviewer because the interviews were in a virtual interview room. Using a previously emailed list of elements cut apart to form small labels,¹⁰ participants were directed to select three specific elements for comparison (see Figure 3-5). Then the researcher used the standard elicitation instruction, or qualifying phrase: 'Look at the three labels in front of you. In what way are two of them the same, but different from the third one when you think about the personal characteristics and motivation that contribute to success at work?' Once the participant had generated a construct to answer this question it was recorded on the grid form using the participant's exact words (Kelly, 1955a). The construct provided as the similarity was recorded in the left-hand column of the interview grid, and the construct representing the difference was recorded on the right-hand side. Following the guidance of Neimeyer and Tolliver (2002), constructs describing physical characteristics were not recorded; instead, the participant was redirected to consider personality and motivation traits.

Figure 3-5 shows the labels being sorted during the standard triadic elicitation of constructs. In the figure, the two elements construed as similar are the *Ideal* and the *SuccessfulRemote*, whereas *Current* is construed as different. (The elements lined up down the right-hand side are not being considered at this point in the interview.)

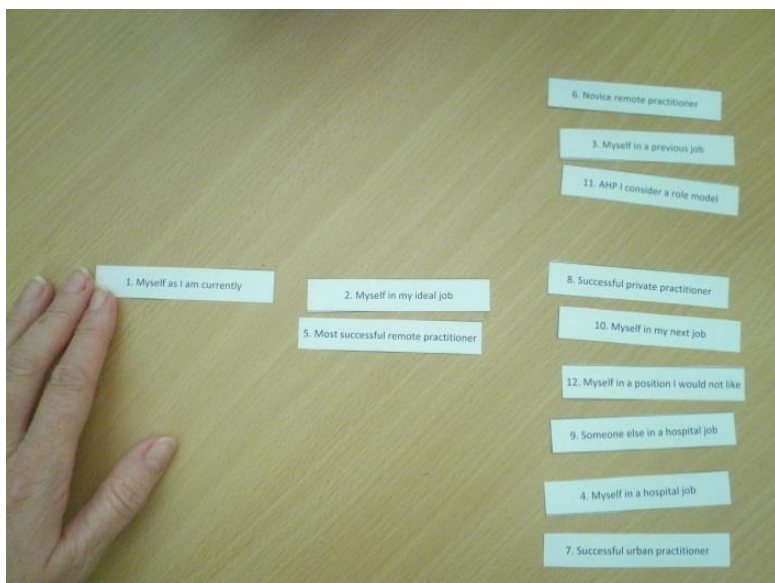


Figure 3-5: Standard triadic construct elicitation process using labels provided

¹⁰ If participants had not printed the labels or cut them apart, they were asked to do this at the time of interview.

In keeping with the usual practice for construct elicitation, the constructs were discussed, or laddered, until the participant's meaning was clear to the researcher (Fransella et al., 2004). Laddering, a technique first developed by Hinkle (1965) and now widely used to clarify the meaning of the construct, suggests the researcher ask 'How' or 'In what way' types of questions to uncover the core of the construct (Jankowicz, 2004; Neimeyer, Anderson, & Robert, 2001). Thus, the bipolar ends of each construct had clear contrast, appropriate detail and an obvious relationship to the topic (Jankowicz, 2004).

At each stage it was critical to remind the participant that their construing of the topic was what the research was investigating, and therefore the construct needed to be in their words, representing what they meant. After the construct was written on the interview form, the participant was asked to rate the construct for all elements on the scale of 1-5, where 1 represented the construct at the similarity pole (left column on the grid example in Figure 3-2) and 5 represented the difference construct (right column).

To aid in understanding, see also the annotated schematic simplified representation of a completed grid that was shown in Figure 3-2. Appendix 2 comprises examples of completed grids.

The interview concluded when no new constructs were able to be elicited. This saturation was usually signalled by participant difficulty in identifying new constructs. One participant described this as:

'When you first asked me that question I thought, there must be heaps of things, but now they are all sort of going in the same direction'. Dimity909

Both the Excel spreadsheet containing the grid and the transcription of the participant's interview were returned to the participant for verification prior to analysis.

3.4.5 Data analysis

Grid analysis commenced after all interviews were complete. The data were examined with 'an open-minded curiosity' (Slater, 1977b, p. 85), using a number of approaches to enable rich, detailed insights from the multiple sources of data generated by the repertory grids (Bell, 2003). Jankowicz argues that the selection of analysis techniques needs to consider whether the analysis accounts for participants' meanings, allows the researcher to make inferences, and creates useful new knowledge (Jankowicz, 2004). Keeping these principles in mind, the analysis was designed to examine both constructs and elements. The constructs were analysed from a qualitative perspective, i.e. a content analysis, while the elements and ratings were analysed from a quantitative perspective, i.e. a statistical approach. In addition, the transcription of the interview, after verification by each individual participant, formed a third source of data that provided examples elaborating on the grid constructs and ratings. (Refer to Figure 3-1.)

3.4.5.1 First steps

The first step in the grid analysis was to 'eye-ball' each grid to understand the number of constructs generated and observe the types of constructs and strength of the ratings for individual grids while looking across grids for common themes or obvious differences (Neimeyer, 1992). Becoming immersed in the data was an important precursor to more detailed analysis (Jankowicz, 2004).

Each grid was also imported into Idiogrid 2.4 (Grice, 2002), purpose-designed repertory grid software for quantitative analysis. Idiogrid provides statistical analysis options, including the full range of descriptive and multivariate statistics, and data reduction techniques.

3.4.5.2 Analysis of the Constructs

The content analysis aimed to look across all participants' constructs to gather insight into how the sample viewed working in remote areas from a qualitative perspective. The qualitative analysis thus added rich understanding and credibility to the quantitative statistics, and therefore truly reflected the mixed methods nature of the study (Greene, 2007).

Following the recommendation of Harter, Erbes, and Hart (2004), the construct was selected as the unit for qualitative analysis:

RepGrid [sic] data naturally lends itself to content analysis, since construct dimensions are elicited in discrete chunks. This eliminates the necessity to unitise the text, which is usually a difficult first step in content analysis of narratives. p 29

Importantly, this decision also ensured that the analysis remained as close as possible to the participants' own words (Harter et al., 2004; Jankowicz, 2004; Leach, Freshwater, Aldridge, & Sunderland, 2001).

The repertory grid literature includes several coding systems for content analysis of constructs (Feixas, Geldschläger, & Neimeyer, 2002; Landfield, 1971). While these systems classified only personal characteristics, the participant constructs also included workplace characteristics. Therefore, it was decided to use the boot strapping method for repertory grid analysis detailed by Jankowicz (2004) and based on the work of Holsti (1968).

Boot strapping entailed examination of each construct for the major theme it contained and the creation of a code to capture the theme. Subsequent constructs were then examined in turn and either categorised to existing codes or a new code created if existing codes were not suitable. The principal researcher coded all constructs, and the two supervisory researchers each independently coded more than twenty percent of the constructs. Discussion on the codes then occurred and was visited iteratively over a number of weeks until all agreed on the meaning and application of each code. Individual constructs that were difficult to categorise were discussed until consensus was

achieved. This ensured the rigour and reliability of the coding process and resulted in full agreement on coding (Creswell, 2014; Jankowicz, 2004).

Some constructs were assigned to more than one code, or the poles of the construct were assigned to different codes (Ellis-Scheer, 2000; Harter et al., 2004). This occurred particularly with nested codes (Feixas et al., 2002, p. 9). For example, the code of motivation frequently had intrinsic and extrinsic motivators nested underneath, where one pole of the construct focussed on extrinsic motivation such as 'financial reward' and the other pole focussed on intrinsic motivation such as 'motivated by need'.

The construct coding was undertaken by hand with all constructs aggregated in Microsoft Excel 2010.

3.4.5.3 Analysis of the Elements

The element analysis aimed to investigate how the sample construed specific elements. The grid ratings form a matrix which can be analysed statistically. In order to undertake the calculations, all grids were imported into Idiogrid. In transferring the data into Idiogrid, two adjustments were made to the grid data. Lengthy constructs were shortened for convenience of reading the analysis output. In keeping with Butler (2006), care was taken to preserve the original intent and meaning by retaining participant's actual words but reducing the length of the construct. For example, '*Specialised nature of job, practising the same clinical skills gives a focus and time to become and expert clinically*' was shortened to '*Specialised clinical expertise*'. Additionally, construct poles and ratings were reversed as necessary in order to account for the assumption of Idiogrid that high scores on ratings corresponded with the similarity pole (Bell, 2004; Grice, 2002).

Statistical analysis of ratings and elements ranges from analyses that capture maximum detail in single grids through to those that provide a broader picture of the aggregated data from multiple grids (Leach et al., 2001). Two different quantitative analyses will be undertaken, one looking across all grids and one looking within individual grids. The first uses a similarity/dissimilarity measure of elements, the Euclidean distance between specific elements across all grids; the second uses singular value decomposition to account for elements, ratings and constructs (Bell, 2004; Caputi & Hennessy, 2008).

Firstly, distances between pairs of elements across all grids will be measured using double-scaled Euclidean distance (Barrett, 2005; Grice, 2002). As a standardised measure that accounts for the number of constructs in each grid, double-scaled Euclidean distance assesses the similarity between the selected elements. Thus, comparison of specific element pairs across the whole sample can be undertaken (Leach et al., 2001). In other words, regardless of the number of constructs developed and rated by an individual participant in their grid, the distance between a

pair of their elements and the distance between the same element pair from other participants can be meaningfully compared. Double-scaled Euclidean distances fall between zero and one, where zero means maximum similarity while one means maximum dissimilarity.

The statistic was calculated in Idiogrid using the formula shown in Figure 3-6 (Barrett, 2005; Grice, 2002) where D is the distance between two elements, x and y for each participant.

$$D_{xy} = \frac{\left(\sum_{i=1}^e \frac{(G_{(ix)} - G_{(iy)})^2}{maxdist} \right)^{1/2}}{\sqrt{N_{pair}}}$$

Legend: N = number of observations in the pair; G = grid values; $maxdist$ = square of the maximum possible scale value minus the minimum possible scale value; e = elements; i = variable.

Figure 3-6: Formula for double-scaled Euclidean distance

The double-scaled Euclidean distances between specific elements will be calculated for the entire sample between the element pairs shown in Table 3-7. The table includes the implication ascribed to the distance between those element pairs. Further explanation about the implications will be provided in Chapter 7.

Table 3-7: Double-scaled Euclidean distances between specific elements and what they imply

Distances between	Described in Chapter 7 as implying:
<i>Current</i> and <i>Ideal</i>	Satisfaction levels in <i>Current</i>
<i>Current</i> and <i>SuccessfulRemote</i>	Alignment between <i>Current</i> and remote work
<i>SuccessfulRemote</i> and <i>Ideal</i>	Identification with remote work, suggesting extent of potential for recruitment and retention
<i>NextJob</i> and <i>Ideal</i>	Expectation about career path

The second quantitative analysis of the grid data is singular value decomposition (SVD) plots. A number of these will be presented as case studies. The SVD is a multivariate statistical analysis similar to the more familiar principal components analysis. It reduces the data in a multi-dimensional matrix to a two-dimensional plot that accounts for elements, constructs and ratings (Bell, 2003) and thus shows ‘the degree to which grid elements and constructs are similar to one another’ (Caputi & Hennessy, 2008, p. 166). It highlights relationships in the grid by analysing patterns of variability, the variance, in the ratings (Grice, 2002). Using eigenvalue decomposition, it accounts for as much variance as possible with as few components as possible. The utility of this approach lies in its ability to identify ‘what needs to change’ in an individual’s circumstances in order to produce a desired outcome (Jankowicz, 2004, p. 294). Both the constructs and elements are shown on the SVD plot.

An example plot is shown in Figure 3-7. Elements, marked by red dots, are plotted within the space as points. Elements plotted closer together are construed as more alike than elements at a distance from each other (Leach et al., 2001). Constructs are plotted as vectors, straight lines intersecting at the junction of the axes. Both the length of the vector and the angle of the vector in relation to other vectors can be interpreted (Grice, 2002). Increasing length indicates greater variance in the construct. Typically, very short vectors are not interpreted because they represent less variance (Leach et al., 2001), i.e. the ratings on the construct did not discriminate between the elements. The angle between the construct vectors in relation to other constructs shows correlations between the ratings of the elements on those constructs, with smaller angles indicating more similar ratings (Jankowicz, 2004). The positions of the elements relative to the constructs indicate the degree of influence of the construct on the element. The constructs are written in blue around the outside of the plot.

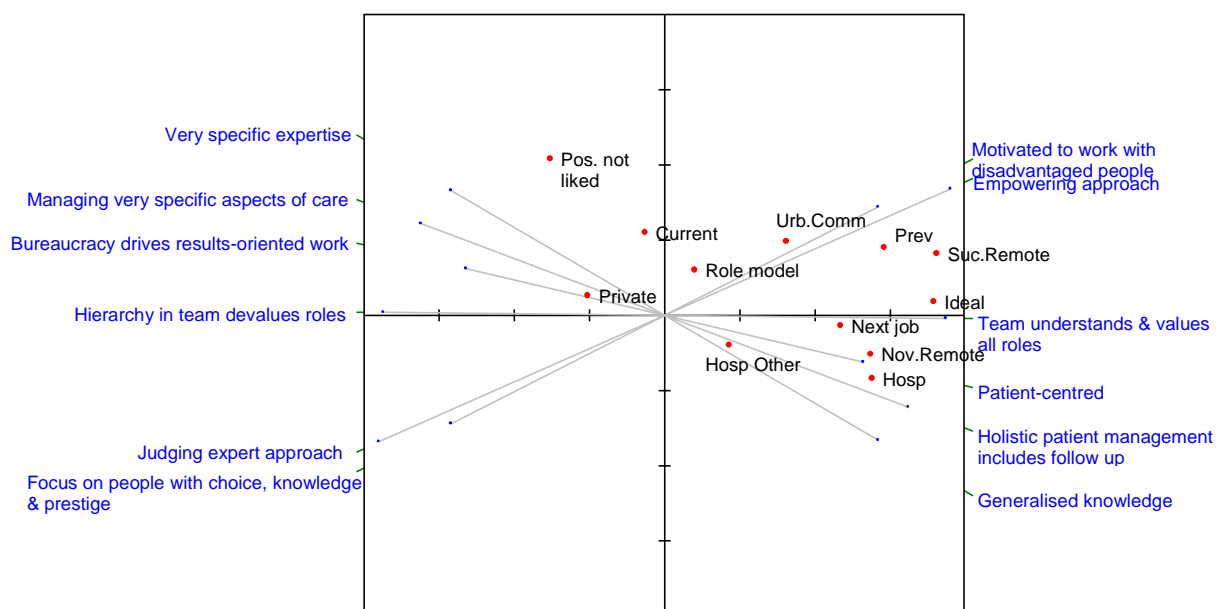


Figure 3-7: Example of a singular value decomposition plot analysing elements and constructs for a single grid

The next section will now move to defending the rigour of Strand 2.

3.4.6 Strand 2 rigour, reliability and validity

Slater (1977b, p. 128), a key proponent of repertory grid technique, argued that significance and reliability as proposed by statistical theory are both inappropriate and inapplicable to repertory grid data. Nevertheless, it is still important to emphasise the rigour of this strand by discussing potential issues related to reliability and validity.

As demonstrated in this methods chapter, Strand 2 followed standard repertory grid techniques, including element selection, construct elicitation, rating and analysis procedures (Jankowicz, 2004). Triadic elicitation has been shown to provide more cognitively complex constructs (Caputi &

Reddy, 1999), while rating each construct in turn has been shown to produce greater differentiation between elements (Adams-Webber, 1997). The sample was selected on the basis of specific demographic features prominent in the larger Strand 1 sample that were considered most useful in answering the research question.

Normally, reliability is concerned with reproducibility of results. However, Fransella et al assert that reliability in repertory grids should aim to assess predictable stability and predictable change, particularly to understand the circumstances that may induce desired change (Fransella et al., 2004). This strength gives credence to the underlying question of this study, asking what might need to change in order to improve recruitment and retention of AH professionals to remote areas.

Findings by Smith (2000) suggest that grid reliability and validity are sufficiently stable to be 'a measure of individual difference' (p224). Despite this, comparisons of the (sometimes conflicting) results from studies examining the reliability and validity of grids is difficult because of the range of methodological choices addressed (Smith, 2000). In a detailed account of these studies, Fransella et al. (2004) concluded that grid research should avoid thinking about reliability as a 'monolithic concept' (p143), but instead understand that generalisability may be specific to the context of the grid, including the sample and the elicitation procedures.

In personality research, validity is normally concerned with whether the instrument measures what it purports to measure; i.e. as measured by its correlations with another similar test. Kelly (1955a) and later Bannister and Bott (1973) argued that the validity of a theory is directly related to its usefulness.

...if we substitute for validity the notion of usefulness, or at least make usefulness the central feature of validity, we shall be less concerned with the correlation between a test and some relatively arbitrary criterion, and more concerned with the values which users of a test find in it (Bannister & Bott, 1973, p. 162).

Fransella et al. (2004) uses the term 'intrinsic validity' (p.144) in thinking about whether the individual grid generated the type of information that it was designed to generate. In other words, has it revealed the construing, the thinking, of the participant such that the relationships between the elements and constructs are observable? For example, during the interview, constructs may be discarded if the participant indicates dissatisfaction with explaining it or in applying it to the elements. Further, care was taken to ensure participant satisfaction with the construct and its meaning (Jankowicz, 2004, p. 20).

Finally, it should be noted that participants were positive about the unique structure of the interview. Although it was lengthy and potentially tiring (Jankowicz, 2004), they valued the opportunity to reflect on their work using a structured but open-minded method.

I like the fact that you haven't come along with pre-conceived ideas. I have been involved with studies where people come along and say, 'Are you this and are you this and are you this?' So this is good. (Faye 341)

The next section will take a step back from strand-specific methodology and discuss how the researcher's voice was considered in the overall integrity of the research.

3.5 The voice of the researcher

Research is a process of knowledge construction in which both the researcher and the participants engage (Guillemin & Gillam, 2004, p. 274). In this sense it is an active process requiring scrutiny, reflection and interrogation of the data – a process in qualitative research often termed 'reflexivity' (Hertz, 1997). The researcher is called to be 'critically conscious through personal accounting of how the researcher's self-location, ... position, and interests influence all stages of the research process' (Pillow, 2003, p. 178). In Personal Construct Theory, this critical consciousness would be demonstrated through the researcher's attention to their role in designing, collecting, analysing and reporting the data, and how they construe the data (Fransella, 2003), or as Slater (1977a, p. 85) put it, how they enact an 'open-minded curiosity'.

The use of 'voice' in research is dependent on the paradigm framing the research but has been said to incorporate many simultaneous dimensions, including the voice of the author and the voices of the participants (Hertz, 1997, p. xi). The positivist approach in Strand 1 will situate the empirical research findings as objective and scientific, with minimal obvious voice of either participants or researcher (Hertz, 1997). In comparison, Strand 2 will privilege the voices of the participants. Their words will be used in the constructs, and they will verify their personal repertory grids and interview transcripts. In the synthesis of the findings of Strand 1 and 2, my voice, the researcher is heard. In keeping with Personal Construct Psychology, this is my construing of the findings (Jankowicz, 2004). In engaging with the findings and drawing conclusions related to the purpose of the study, I will listen to the participants, reflect on my own understanding, based on personal experience of what it means to work in a remote area, and combine this with the quantitative results and the literature.

My own understanding of working in remote areas has been gained through various work responsibilities over a career spanning nearly three decades. It includes working as a new graduate speech pathologist in a remote area, and more recently, responsibility for supporting both AH and medical students undertaking remote placements. Through overseas study and work opportunities, particularly in Canada, I have developed an appreciation for the commonalities experienced across the developed world in recruiting and retaining workforce in remote areas. The experiences I bring will require that I 'deconstruct' my authority as the researcher and become consciously aware of the implications of my own understanding of the rural and remote issues created from personal experiences (Pillow, 2003, p. 183). As described by Hertz (1997, p. iii),

creating trust-worthy research means simultaneously constructing an interpretation of the data while questioning how those interpretations came about.

3.6 Ethics

Ethical approval was provided through The University of Queensland's Behavioural and Social Sciences Ethical Review Committee number 2010000872 (Appendix 3).

3.7 Structure of results and final discussion chapters

Given that this research undertook two separate but complementary strands, the chapters that follow will be structured around each strand.

Strand 1 results will be presented first in Chapter 4, which comprises a short introduction followed by two peer-reviewed, published articles presented in standard thesis format as required by the university. The first paper analyses the personality data from the perspective of location of work (remote or not remote), while the second takes a fine-grained approach to personality characteristics within professions and applies a categorisation of person-oriented or technique-oriented professions, as discussed in the literature review.

Strand 2 results will be presented in the following three chapters. Chapter 5 contains an introduction and description of the sample characteristics. Chapter 6 contains the Strand 2 results for the content analysis of the constructs, i.e. the results of the qualitative component of the study. Chapter 7 contains the Strand 2 results for the quantitative analysis of the elements. This chapter also includes a number of case studies which begin to integrate the findings from Strands 1 and 2.

Chapter 8 synthesises the results from both strands, examining how the personality and motivation data interconnect with the construing of AH professionals about working in remote areas. Chapter 9 provides a conclusion and recommendations for increasing recruitment and retention of AH professionals in remote areas.

Chapter 4

Strand 1: Results and Discussion

4 Strand 1: Results and Discussion

4.1 Introduction

This chapter presents the results of the analysis of the Strand 1 data. The overarching aim was to understand whether particular levels and combinations of temperament and character traits in allied health (AH) professionals might contribute to a better understanding of successful recruitment and retention of a workforce for remote areas.

In order to meet this aim, the personality traits as measured by the Temperament and Character Inventory (TCI) (Cloninger et al., 1994) of the Strand 1 sample are described, and the association between the traits and demographic characteristics of the sample is investigated. This analysis addresses a number of questions, all of which build the picture of the relationship between personality dimensions and AH professionals with and without remote experience. These questions include:

- How do the personality traits of AH professionals compare with previously published population data (Cloninger et al., 1994)?
- Are there differences in the personal trait characteristics of AH professionals who are currently working or have worked in remote areas, compared with those who have not?
- Is there a relationship between gender and the TCI dimensions?
- Is there a relationship between age and the TCI dimensions?
- Is there a relationship between the focus of the profession, as either person-oriented (PO) or technique-oriented (TO)¹¹ and the TCI dimensions?
- Are there observable differences among different AH professions in relation to the TCI dimensions?

This chapter mainly comprises two peer-reviewed published papers that contain the results of the Strand 1 analysis. Both are presented as the accepted author manuscript but re-formatted according to The University of Queensland's thesis requirements. Thus, the references for these papers are included in the reference list at the end of the whole thesis. Note that each paper is preceded by its abstract and, according to the journal requirements, also includes the key known information on the topic and the new knowledge created by the paper.

Each paper conforms to the manuscript length for the target journal and uses the standard scientific writing format. Thus, each paper commences with an introduction to the problem and the specific research questions addressed. This is followed by descriptions of the relevant literature,

¹¹ As described in the literature review chapter (Section 2.2.4) 'person-oriented' professions are said to have a focus on the therapeutic relationship with patients, while 'technique-oriented' professions have a focus on technical skills and procedures (Borges & Savickas, 2014; Wasserman et al., 1969; Yufit et al., 1969).

and then of the methods, including both the research design and the approach to analysis, before presenting the results and concluding with a discussion of the relevance of the findings.

Each paper takes a unique angle on the Strand 1 sample, analysing the data from a different perspective and with a different aim in order to more fully understand how personality characteristics may assist in addressing the problem of recruitment and retention of AH professionals to remote areas.

Characteristics of the sample ($n=561$)¹² are described fully in the first paper in this chapter. Tests of normality (Kolmogorov-Smirnov statistic, normal quantile-quantile plots) showed the TCI scores for the entire sample to be normally distributed. Internal consistency (Cronbach's alpha) of the subscales ranged from 0.76 to 0.89.

The first results paper, presented in Section 4.2 as **Journal article 2**, focuses primarily on differences observed in personal trait levels between AH professionals with and without remote experience. It uses this information to obtain a better understanding of those personality dimensions that may assist AH professionals to thrive in the remote environment. Given the paucity of literature on personality in AH professions, this paper provides the first empirical evidence of personality trait levels in remote AH professionals and suggests that there are identifiable differences between AH professionals who work in remote areas and those who choose not to. It discusses how this information may assist individual AH professionals considering remote work to develop insight into their fit with the remote work environment. Additionally, it aims to influence policy that seeks to address recruitment and prolong retention of the remote AH professional workforce.

Journal article 2 was published as:

Campbell, N., Eley, D., & McAllister, L. (2013). What does personality tell us about working in the bush? Temperament and character traits of Australian remote allied health professionals. *Australian Journal of Rural Health*, 21(5), 240-248. doi: 10.1111/ajr.12047

Prior to publication it was presented at the SARRAH conference in Launceston, September 2012.

The second results paper, presented in Section 4.3 as **Journal article 3**, describes the examination of the Strand 1 sample using the framework of the PO (socially dependent, cooperative and relationship-focussed orientation) or TO (focussed on skills and procedures)

¹² Note the difference of 1 between the sample size reported in the first paper ($n=561$) and the second paper ($n=562$). The additional participant did not specify their profession and so was excluded from paper 1. However, during data analysis for the second paper it was noticed that this participant had given a free text response naming their profession and so was added into the sample for the second paper.

classification. It sought to understand whether this classification might be useful in enhancing recruitment and retention of specific AH professions to remote areas. This classification has previously been used in medical specialities to understand the influences on speciality choice in the medical profession (Borges & Gibson, 2005; Taber et al., 2011).

After classifying each of the AH professions to either the PO or TO group, the paper investigated differences in TCI trait levels between the groups. The trends in personality traits of individuals in certain AH professions were found to be compatible with the orientation of that profession. The congruence between the PO and TO aspects of professions suggests that the classification may have utility for recruitment and retention. This information may be useful in understanding how the work of certain professions may be influenced by personal traits, which in turn can contribute to a better understanding of how to recruit and retain these professional groups for the remote area AH workforce.

Journal article 3 was published as:

Campbell, N., Eley, D. S., & McAllister, L. (2013). Investigating personality and conceptualising allied health as person or technique oriented. *Australian Health Review*, 38(1), 86-92. doi: 10.1071/AH13109

4.2 Journal article 2: What does personality tell us about working in the bush? Temperament and character traits of Australian remote allied health professionals

Citation

Campbell, N., Eley, D. S., & McAllister, L. (2013). What does personality tell us about working in the bush? Temperament and character traits of Australian remote allied health professionals. *Australian Journal of Rural Health, 21*(5), 240-248. doi: 10.1111/ajr.12047

4.2.1 Abstract

Context: Recruitment and retention of allied health (AH) professionals in remote Australia is problematic.

Objective: To describe the personality (temperament and character traits) of remote Australian AH professionals. Recent research shows that health professionals can be differentiated by personality traits but little is known about the personality traits of AH professionals.

Design: Cross-sectional (online) survey design with snowball sampling of participants.

Setting and Participants: Australian AH professionals (N= 561; women, $n=502$) classified into Remote ($n=266$) and Not Remote ($n=295$).

Main outcome measure(s): Demographic variables and the Temperament and Character Inventory (TCI R-140).

Results: Remote AH professionals were higher in Novelty Seeking ($P=0.037$) and Self-transcendence ($P=0.042$). Remote women were lower in Harm Avoidance ($P=0.042$). Older remote AH professionals were lower in Reward Dependence ($P=0.001$); younger remote AH professionals were lower in Self-directedness ($P=0.001$) and higher in Harm Avoidance ($P<0.001$). Women were more Reward Dependent ($P<0.001$) and Cooperative ($P=0.008$) than men.

Conclusions: The sample demonstrated personality trait levels aligned with research on rural doctors and nurses and which might be advantageous for working in a challenging environment. Exploring the more stable nature of temperament traits coupled with the modifiable potential of character traits provides new insight into people who choose to work as a remote AH professional. These findings may contribute to a better understanding of the personality trends in these AH professionals, which may provide clues to improve recruitment and retention strategies.

Key words: Allied health professional, Personality, Remote practice, Recruitment, Retention

What is already known on this subject?

AH professional workforce in remote Australia is in short supply.

Recent original research suggests a link between understanding personality trait levels in rural doctors and nurses which might be helpful in recruitment and retention strategies.

What does this study add?

This study provides the first information about personality traits in remote AH professionals. It suggests that there are identifiable personality differences between AH professionals who work in remote areas and those who choose not to.

AH professionals may find this informative in self-reflecting on their own interest in remote work.

Employers and policy-makers may find this useful in supporting AH professionals already working in remote areas, as well as those contemplating remote work.

4.2.2 Introduction

In the face of an ageing population, a retiring baby boomer workforce, and despite strategies addressing a rural and remote health workforce shortage, allied health (AH) professional supply to rural and remote Australia remains problematic (Humphreys, Wakerman, Pashen, et al., 2009; Lowe & O'Kane, 2004). For example, the AH professional workforce ratio in major cities compared with remote areas is 6:1 (The Australian Health Ministers Conference, 2012). Increasing remoteness is associated with increased health disadvantage, and poor access to health professionals due to workforce shortages contributes to this reduced health status (Australian Government Department of Health and Ageing, 2008). Investigation of personality, and in particular temperament and character traits, as an additional approach to the recruitment and retention problem has recently emerged as potentially differentiating between Australian urban and rural health professionals (Eley et al., 2011; Eley et al., 2009b).

Investigating connections between personality and career choice is not new. Using a variety of measures, personality was found predictive of performance and success in police work (Detrick, Chibnall, & Luebbert, 2004) and influential in occupational choice (Sutin & Costa, 2010), including medical specialty (Borges & Savickas, 2002; Kluger, Laidlaw, Kruger, et al., 1999; Vaidya et al., 2004). An American study of occupational and physical therapists found personality differentiated between the two professions (Lysack et al., 2001). However, an Australian study suggested that personality did not influence career choice for first year medical radiation science and speech pathology students (Adamson et al., 2003).

Recent research on the Australian rural and remote health workforce found differences in personality trait levels with published population norms; as well as trait patterns that distinguished rural and urban general practitioners (GPs) (Eley et al., 2009b), medical students (Eley et al., 2009a) and nurses (Eley et al., 2011). Rural professionals and students showed higher levels of Persistence (industriousness), Self-directedness (purposefulness), Cooperativeness and Reward Dependence (social attachment) and lower levels of Harm Avoidance (anxiousness) (Cloninger et al., 1993) Jones et al also found rural GPs to be more 'down to earth' (lower in openness) (Jones et al., 2012). None of these studies included AH professionals.

This paper reports the first Australian study to describe personality in AH professionals using a cross-sectional descriptive national sample. The research aim was to contribute to AH professional workforce data and the recruitment and retention problem, with a particular focus in remote Australia, by describing the sample overall, comparing those experienced and not experienced in remote work, and propose how any differences might be adaptive to the remote work environment. The research questions were: How do the personality traits of AH professionals compare with published data; and are there differences in the personal trait characteristics of AH professionals who are currently working or have worked in remote areas, compared with those who have not?

4.2.3 Method

The University of Queensland Behavioural and Social Sciences Ethical Review Committee provided ethics approval. This study was a cross-sectional survey design (self-report questionnaire) and part of the larger Rural and Remote Allied Health Motivation and Personality study (RRAHMP).

4.2.3.1 Participants

Due in part to the diversity in Australian AH professional work settings and service provision, defining who is an AH professional is problematic. This study used criteria proposed by Lowe et al. (2007) to include the professions of audiology, chiropractic, dietetics/nutrition, environmental health, exercise physiology, imaging, medical laboratory science, occupational therapy, optometry, oral health, orthotics/prosthetics, pharmacy, physiotherapy, podiatry, psychology, social work and speech pathology.

Participants were recruited using snowball sampling. Services to Australian Rural and Remote Allied Health (SARRAH), the peak body for Australian rural and remote AH professionals, distributed an electronic invitation to participate containing the online survey link. Recipients were requested to forward the invitation to others who might also wish to participate. The survey was open for six months in 2010-2011.

4.2.3.2 Setting

Sampling through SARRAH intentionally recruited AH professionals with an interest in remote and rural areas. However, AH professionals working anywhere in Australia were eligible. The Australian Standard Geographical Classification Scheme Remoteness Areas (ASGC-RA) (Department of Health and Aged Care & National Key Centre for Social Applications of Geographic Information Systems, 2001) was used to classify participants by geographical work location history. Developed by the Australian Bureau of Statistics, the ASGC-RA specifies five geographical locations: major cities (RA1), inner regional (RA2), outer regional (RA3), remote (RA4) and very remote (RA5) areas. For this analysis, participants were allocated to one of two groups; 'Remote' if they had worked in RA4 or RA5 at some point in their career; and 'Not Remote' if they had never worked in RA4 or RA5.

4.2.3.3 Data collection methods and tools

Participants completed an on-line survey containing demographic questions and the Temperament and Character Inventory-R140 (TCI) (Cloninger et al., 1994). Survey completion took approximately 40 minutes.

Demographic questions included gender, year of birth, profession, work role, current, previous and possible future work locations (ASGC-RA reference map provided for accuracy (Department of Health and Ageing, 2009)), marital status, dependants, rural background, and rurality of university training including placements.

The TCI uses 140 questions with a five-point Likert scale (definitely false, to definitely true). The results can be reported as raw scores and ranked against published normal population distributions (very low, low, average, high, very high) (Cloninger et al., 1993).

The TCI was selected because its biopsychosocial foundation provides multiple insights into personality (Cloninger, 2004; Cloninger et al., 1993). The results show the degree to which an individual demonstrates each of seven traits; four temperament and three character.

Temperament traits are genetic, biological dimensions of personality that are mildly heritable (Cloninger, 2004; Cloninger et al., 1993). Being innate aspects of personality, they allow automatic emotional responses that are somewhat predictable. The four temperament traits are Harm Avoidance, Novelty Seeking, Reward Dependence and Persistence.

In contrast, character traits are developmental, and can be shaped by environmental, socio-cultural and developmental influences (Cloninger, 2004; Cloninger et al., 1993). Insight, maturation and a person's psychological and social milieu can modify the strength of these traits. The three character traits are Self-directedness, Cooperativeness and Self-transcendence.

Table 4-1 describes the dominant characteristics associated with high or low scores on each trait.

Table 4-1: Temperament and Character Inventory dimension descriptors

<p>Temperament is defined as those components of personality that are developmentally stable, emotion-based and not influenced by socio-cultural learning. The four dimensions of temperament, which reflect a mildly heritable bias, are:</p>		
Temperament	High Scorers	Low Scorers
<p>Novelty Seeking: observed as exploratory activity in response to novelty, impulsiveness and extravagance</p>	<p>exploratory and curious impulsive, disorderly extravagant and enthusiastic seeks challenge</p>	<p>indifferent, reflective frugal and detached orderly and regimented</p>
<p>Harm Avoidance: observed as pessimistic worry in anticipation of problems, fear of uncertainty, shyness with strangers, and rapid fatiguability</p>	<p>worrying and pessimistic fearful and doubtful shy, fatiguable indecisive</p>	<p>relaxed and optimistic bold and confident outgoing, vigorous opinionated, decisive</p>
<p>Reward Dependence: indicates cues of social reward and is observed as sentimentality, social sensitivity, attachment, and dependence on approval by others</p>	<p>sentimental and warm dedicated and attached dependent needs to please seeks approval from others</p>	<p>practical and cold withdrawn and detached independent not influenced by others socially insensitive</p>
<p>Persistence: describes behaviour despite frustration, fatigue and reinforcement. It is observed as industriousness, determination and perfectionism</p>	<p>industrious and diligent hard-working ambitious and overachiever perseverant and perfectionist determined</p>	<p>inactive and indolent gives up easily unambitious underachiever quitting and pragmatist</p>
<p>Character traits reflect personal goals and values and are subject to socio-cultural learning. Each trait quantifies the extent to which an individual displays certain related qualities.</p>		
Character	High Scorers	Low Scorers
<p>Self-directness: quantifies the extent to which an individual is responsible, reliable, resourceful, goal-oriented and self-confident</p>	<p>responsible and reliable purposeful, self-accepted resourceful and effective habits congruent with long-term goals</p>	<p>blaming and unreliable purposeless, self-striving inert and ineffective habits congruent with short-term goals</p>
<p>Cooperativeness: quantifies the extent to which individuals are cooperative, tolerant, empathic and principled</p>	<p>socially tolerant empathic, helpful compassionate, constructive ethical and principled</p>	<p>socially intolerant critical, unhelpful revengeful and destructive opportunistic</p>
<p>Self-transcendence: quantifies the extent to which individuals conceive themselves in relation to the universe as a whole. It is observed as spirituality, practicality, materialism and modesty</p>	<p>wise and patient creative, imaginative self-effacing united with universe modest, humble, spiritual</p>	<p>impatient unimaginative proud and lack of humility materialistic practical</p>

Eley and Eley (2011) adapted from Cloninger et al. (1994)

4.2.3.4 Analysis

Analysis was descriptive of the whole sample and comparative between groups using independent samples *t*-test, ANOVA and subsequent two-way ANOVA, with a 95% confidence level for measuring differences between important variables. SPSS 19 (SPSS Inc, Chicago, IL, USA) was used.

4.2.4 Results

Snowball sampling precluded calculation of an overall response rate. A total of 580 responses were collected, of which 561 were eligible for inclusion (eligible profession, complete TCI and RA location provided).

4.2.4.1 Demographics

The whole sample profile was predominantly female Australian-qualified, practising clinicians with a mean of 12.1 years' experience (calculated as number of years since graduation). Professions providing the highest survey response were physiotherapists (18.5%), speech pathologists (17.4%), occupational therapists (16.7%) and dietitians (15.1%). Results of individual professions will be reported in future papers.

Table 4-2 provides detail on the demographic characteristics of the total sample, as well as dividing the sample into the two groups of interest: Remote and Not Remote. As described earlier, the Remote/Not Remote classification was based on whether the AH professional had experience working in RA4 or RA5, not on current work location. In the Remote group, 59% were currently working in RA4 or RA5. In the Not Remote group, nine percent were currently working in RA1 and the rest were RA2 or RA3. There was no significant difference between the years of experience in the Remote and Not Remote groups.

Table 4-2: Distribution of sample by demographic characteristics and remoteness

Demographic characteristic	Sample n (%)	Not Remote group (Only ever worked RA 1-3) n (% of total)	Remote group (Worked RA4 or RA5 at some time during career) n (% of total)
Total	561(100)	295 (52.5)	266 (47.3)
Female	502 (90.1)	266 (47.8)	236 (42.2)
Practising clinician	427 (76.7)	228 (40.9)	199 (35.7)
Age	551 (98.2)	293 (52.22)	258 (45.98)
Mean (years)	36.7	35.7	37.8
Standard deviation	11.2	10.8	11.7
Partnered	405 (72.2)	222 (54.8)	183 (45.2)
Dependants	210 (37.6)	110 (19.7)	100 (17.9)
Australian qualification	520 (92.7)	277 (53.3)	243 (46.7)
Experience (years qualified)			
<i>Mean</i>	12.1	10.9	13.4
<i>Standard deviation</i>	10.1	9.6	10.6
Rural or remote background	265 (47.2)	143 (54)	122 (46)

4.2.4.2 Whole-sample Temperament and Character Inventory description

Tests of normality (Kolmogorov-Smirnov statistic, Normal quantile-quantile Plots) showed the TCI scores for the entire sample to be normally distributed. Internal consistency (Cronbach's Alpha) of the subscales ranged from 0.76 to 0.89. Table 4-3 shows the TCI subscale means, standard deviations and ranking by comparison with population norms for the whole sample and then split by gender and age.

Table 4-3: Temperament and Character Inventory mean subscale scores for the total sample, by gender and age and their comparison to population norms

Subscale	Total Sample	Gender		P value for gender	Age			P value for age
	(n=561) Mean (SD) Pop rank†	Men (n=55) Mean (SD) Pop rank	Women (n=502) Mean (SD) Pop rank		Youngest <30 years (n=228) Mean (SD) Pop rank	Middle 31-45 years (n=197) Mean (SD) Pop rank	Oldest >46 years (n=127) Mean (SD) Pop rank	
Novelty Seeking	55.55 (8.39) High	56.85 (8.11) High	55.53 (8.38) High	0.784	54.75 (8.45) Average	56.25 (9.04) High	55.64 (7.11) High	0.162
Harm Avoidance	54.19 (11.95) Average	51.27 (12.20) Average	54.49 (11.92) High	0.059	56.65 (9.04) High	52.49 (11.88) Average	52.31 (11.18) Average	0.000*
Reward Dependence	71.84 (9.58) Very high	66.24 (9.72) Very high	72.50 (9.39) Very high	0.000*	73.42 (9.15) Very high	71.85 (10.07) Very high	69.28 (8.91) Very high	0.000*
Persistence	72.36 (9.50) Very high	72.60 (8.81) Very high	72.36 (9.60) Very high	0.857	71.67 (9.929) Very high	73.69 (9.24) Very high	71.74 (8.72) Very high	0.059
Self-directedness	77.38 (9.91) Very high	77.00 (10.04) Very high	77.44 (9.94) Very high	0.757	75.42 (9.66) Very high	78.67 (10.60) Very high	78.84 (8.88) Very high	0.001*
Cooperativeness	83.35 (7.31) Very high	80.84 (7.74) Very high	83.61 (7.23) Very high	0.008*	82.56 (7.28) Very high	83.86 (7.74) Very high	84.09 (6.49) Very high	0.085
Self-transcendence	44.96 (11.08) Low	43.85 (12.80) Low	44.99 (10.89) Low	0.530	43.50 (10.16) Low	44.37 (11.48) Low	44.57 (11.02) Low	0.000*

*significant at P<0.05

†Pop rank = Ranking of mean score against TCI normative percentile rankings for population norms. (Cloninger et al, 1993): Very Low=0–16.7%; Low=17–33%; Average=34–66.7%; High=67–83.3%; Very High=84–100%

Comparison of the entire sample's subscale scores with Cloninger's published population norms (Cloninger et al., 1994) showed them to be very high in levels of two temperament traits, Reward Dependence and Persistence; and in two character traits, Self-directedness and Cooperativeness.

Gender: An independent samples *t*-test compared the TCI subscale scores by gender within the whole sample. Women were significantly higher in Harm Avoidance ($P=0.059$), Cooperativeness ($P=0.008$) and Reward Dependence ($P<0.001$) compared with men. Effect sizes were small.

Age: A one-way between-groups ANOVA with *post hoc* Tukey's test explored differences in TCI trait levels by age within the whole sample. Participants were divided into 3 groups (younger: 30 years or under; middle: 31-45 years; older: over 46 years). Table 4-3 shows that there were statistically significant differences at $p<0.05$ in 4 out of 7 traits, though all effect sizes were small.

Harm Avoidance in the younger group was significantly higher ($P<0.001$; *eta R*=0.030) than in the middle and older groups, which were not different from each other. Reward Dependence was significantly lower ($P<0.001$; *eta R*=0.027) in the older group, but not significantly different between the middle or younger groups. Self-directedness in the younger group was significantly lower ($P=0.001$; *eta R*=0.027) than in the middle and older groups, which were not different from each other. Self-transcendence was significantly higher ($P <0.001$; *eta R*=0.033) in the older group compared with the others.

4.2.4.3 Differences by remoteness

The TCI trait levels for the Remote compared with Not Remote AH professionals, as well as comparisons between the Remote and Not Remote women, are shown in Table 4-4.

Table 4-4: TCI mean subscale scores by Remote and Not Remote groups and their comparison to population norms.

Subscale	TCI by remoteness in total sample			TCI by remoteness in women		
	Remote (n=266)	Not remote (n=295)	P value for remoteness	Remote women (n=236)	Not remote women (n=266)	P value for remoteness for women
	Mean (SD) Pop rank†	Mean (SD) Pop rank		Mean (SD) Pop rank	Mean (SD) Pop rank	
Novelty Seeking	56.33 (8.22) High	54.85 (8.49) Average	0.037*	56.28 (8.42) High	54.85 (8.33) Average	0.057
Harm Avoidance	53.21 (11.64) Average	55.07 (12.17) Average	0.064	53.35 (11.65) Average	55.52 (12.10) High	0.042*
Reward Dependence	71.63 (9.82) Very high	72.02 (9.38) Very high	0.629	72.28 (9.75) Very high	72.65 (9.07) Very high	0.656
Persistence	71.83 (9.47) Very high	72.84 (9.51) Very high	0.207	71.89 (9.47) Very high	72.78 (9.72) Very high	0.299
Self-directedness	77.68 (9.25) Very high	77.12 (10.47) Very high	0.503	77.56 (9.28) Very high	77.28 (10.48) Very high	0.757
Cooperativeness	83.81 (6.83) Very high	82.94 (7.70) Very high	0.160	84.06 (6.37) Very high	83.20 (7.64) Very high	0.184
Self- transcendence	45.96 (11.56) Average	44.05 (10.56) Low	0.042*	46.11 (11.37) Average	44.02 (10.37) Low	0.032*

*significant at $P < 0.05$

†Pop rank = Ranking of mean score against TCI normative percentile rankings for population norms (Cloninger et al, 1993): Very Low=0–16.7%; Low=17–33%; Average=34–66.7%; High=67–83.3%; Very High=84–100

An independent-samples *t*-test revealed that Remote AH professionals were higher in Novelty Seeking ($P=0.037$) and Self-transcendence ($P=0.042$) compared with Not Remote AH professionals and were lower in Harm Avoidance, although this only approached significance ($P=0.064$). Effect sizes were small.

Gender and Remoteness: Remote women were significantly lower in Harm Avoidance ($P=0.042$), and higher in Self-transcendence ($P=0.032$) than Not Remote women, but effect sizes were again small. No differences were found in TCI trait levels between Remote ($n=28$) and Not Remote ($n=27$) men.

Age and Remoteness: Two-way between-groups ANOVA with *post hoc* comparisons (Tukey's honestly significant difference) explored the impact of age and remoteness on levels of each TCI trait. No interactions were detected. No main effects were detected for remoteness. The following traits showed a main effect for age: Harm Avoidance [$F(2, 545)=8.20$; $P=0.000$; $\eta_p^2=0.029$], younger group higher ; Reward Dependence [$F(2, 545)=7.35$; $P=0.001$; $\eta_p^2=0.026$], older group lower; Self-directedness [$F(2, 545)=7.66$; $P=0.001$; $\eta_p^2=0.027$], younger group lower; Self-transcendence [$F(2, 545)=9.06$; $P=0.000$; $\eta_p^2=.032$], older group higher.

4.2.5 Discussion

This paper reports on some of the first research to explore the personality traits of AH professionals with the view to better understand those who choose to work in remote locations. Increased clarity about the characteristics of these professionals could assist development of further strategies to address recruitment and retention problems. The large sample size taken from across Australia is a strength of this study. The demographic characteristics of the sample were similar to those in other recent studies of AH professionals in rural and remote Australia (Campbell, Smedts, Lowe, Keane, & Smith, 2010; Keane et al., 2011) except for being younger (Australian Institute of Health and Welfare, 2010a) and less experienced, and with a slightly greater participation by women (Australian Institute of Health and Welfare, 2010a).

The AH professionals in this study differed in important ways from the general population by scoring high in traits of Novelty Seeking, and very high in Reward Dependence, Persistence, Self-directedness and Cooperativeness. Interestingly, they were lower than population norms in Self-transcendence. These findings align with the findings of recent Australian workforce personality investigations by Eley et al on rural and urban doctors, nurses, and medical and nursing students (Eley et al., 2011; Eley et al., 2009a, 2009b; Eley et al., 2008).

In light of the fact that our sample had a higher representation of women, it is of note that three traits, Harm Avoidance, Reward Dependence and Cooperativeness, were found to be associated with gender. This mirrors the findings of research on Australian rural nurses and doctors (Eley et al., 2011; Eley et al., 2009b). The original TCI research findings (Cloninger,

1994) also reported higher Reward Dependence in women, as did a study of medical student specialty choice (Vaidya et al., 2004).

Practical implications of higher levels of Reward Dependence and Cooperativeness could be advantageous to AH professionals in building helpful client and team relationships. These traits might potentially undermine improvements to career pathways and recognition for the importance of the AH professional role in patient care. The AH professionals who are highly reward dependent and cooperative might choose to focus on patient goals rather than professional career goals. However, their high levels of Persistence and Self-directedness, seen as a mature personality – ambitious and industrious, with a willingness to persevere – might assist to offset this potential disadvantage.

4.2.5.1 Personal trait differences between the Remote and Not Remote groups

One of the main aims of this study was to compare the levels and combinations of temperament and character traits in Remote and Not Remote AH professionals. We found that our group was largely young and female across both groups, and the trends in TCI traits were congruent with previous studies in rural health professionals.

The higher mean score for Novelty Seeking of AH professionals in the Remote group compared with the Not Remote group could be indicative of someone who is curious and open to new experiences and thus more likely to explore working and living in the bush. Novelty Seeking may also provide AH professionals with an adaptive advantage for coping with diverse models of service delivery and challenges that can accompany bush work (Wakerman et al., 2008), while retaining enthusiasm and energy for work (Thomas & Clark, 2007), for example, consultations under a tree or sitting on a client's veranda (Thomas & Clark, 2007), compared with the predictability of working in an air-conditioned purpose-built urban office, clinic or ward. However, caution was sounded by recent research on dentists in remote Australia who reported that a desire for novelty and adventure did not promote long-term retention (Hall et al., 2007).

Potentially, in professionals who are long-term stayers, other personal traits or factors balance the desire to continually explore new frontiers. Novelty Seeking has been reported as a temperament characteristic which can decrease with age (Cloninger, 2004). While we did not see this trend, it might imply that rural and remote work attracts interest regardless of age.

While not statistically significant in the whole sample, Harm Avoidance levels in the Remote women were lower than the Not Remote women. Harm Avoidance is observed as

pessimistic worry in anticipation of problems and fear of uncertainty (Cloninger et al., 1993). Therefore, lower levels might be advantageous and provide optimism to face challenges frequently found in remote work. Delays, isolation, last-minute changes to schedules, high staff turnover, the vagaries of weather, community closures, and long-distance travel all contribute to a challenging work environment (Thomas & Clark, 2007). Of note is that Harm Avoidance was highest in the younger group. This finding will require further investigation but might suggest important considerations around recruitment of younger AH professionals and highlights the utility of these findings for career counselling; inexperienced young AH professionals with low confidence and increased anxiety could be counselled to improve their confidence and face their fears through education and training.

Self-transcendence is a character trait that describes ability to see oneself in relation to a bigger picture. Characterised by spirituality, humility and unpretentiousness, it is adaptive in the face of suffering. The higher levels found in remote AH professionals would presumably be helpful in cross-cultural interactions commonly required in remote areas (Thomas & Clark, 2007). Our older group showed the highest Self-transcendence scores, supporting the notion of character traits maturing (Cloninger et al., 1993).

4.2.5.2 Limitations and future directions

Potential sampling bias from our snowball recruitment through SARRAH is a possible limitation, and the strongly female sample participants could be biased and possibly motivated by interest in rural and remote; a point noted in the high levels of Cooperativeness. While some significant differences were detected between groups, all effect sizes were small, and therefore over-interpretation of the data should be avoided. Nevertheless, this is a sizeable and credible sample from across Australia, and our findings are the first to contribute to a better understanding of remote AH professionals. Recruiting more RA1 AH professionals to undertake a similar study may allow comparison between urban, rural and remote professionals.

4.2.6 Conclusion

This study provides a starting point towards a better understanding of the personality of AH professionals and in particular of those who choose to work or not work in remote Australia. Regardless of work location, AH professionals in this study reported high levels of certain traits such as Cooperativeness, compared with population norms, that may be potentially helpful in their work roles. Remote AH professionals were particularly high in Novelty Seeking, which may be a useful feature for recruitment. They were also lower in Harm Avoidance, which could be helpful in dealing with the uncertainty of remote practice. Higher

Harm Avoidance in younger participants may indicate a need for recruitment and retention policies that provide support for novice remote AH professionals as they adapt to this uncertainty and learn to work effectively in the remote context.

Everyone has a unique combination of traits that make them what they are. Policy should not adopt a 'one size fits all' approach. Promoting changes in the remote work environment should be informed by the unique personalities of the people who work in the bush. Our study has laid the groundwork for such an approach.

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4.3 Journal article 3: Investigating personality and conceptualising allied health as person or technique oriented

Citation

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4.3.1 Abstract

Objective: Allied Health (AH) includes many diverse professions, each with a unique contribution to healthcare, making it possible to consider these professions as person-oriented (PO) or technique-oriented (TO). This paper explored the personality traits of AH professionals from the perspective of both the PO or TO orientation and the individual professions.

Methods: AH professionals ($n=562$) provided demographic data and completed the Temperament and Character Inventory. Examination of the literature and a consultation process resulted in nine professions classified as PO and 10 as TO. Multivariate analyses compared levels of personality traits and demographic variables between the PO ($n=492$) and TO ($n=70$) groups, and the professions within the groups.

Results: Professionals in the PO group showed significantly higher levels of traits that emphasise person-orientation attributes such as being sociable, empathic, and cooperative compared with AH professionals in professions with an emphasis on TO.

Conclusions: Trends in personality traits among AH professionals were congruent with the PO and TO aspects of their chosen profession. This supports the usefulness of the PO and TO concepts in describing AH professions and may provide new clues for policy aiming to enhance job satisfaction, retention and career development.

What is known about the topic?

The literature suggests that certain medical specialities can be classified as person- (PO) or technique-oriented (TO) and that individuals attracted to those specialties display traits that are similar to that orientation. There is scant information on the AH professions regarding similar person or technique orientations.

What does this paper add?

The diversity of professions within AH allows a new approach to describing each profession as either PO (socially dependent, cooperative and relationship focussed) or TO (focussed on skills and procedures). The trend in personality traits of individuals in certain AH professions is compatible with the orientation of that profession. Findings suggest that individuals may be attracted to professions that favour a similar personality pattern to their own.

What are the implications for practitioners?

Gaining an improved understanding of the AH professions and individuals who are attracted to them in a climate of workforce shortage and increasing multi-disciplinary service demand. The findings provide a new approach to understanding the characteristics of AH professions according to the personalities they attract. This information could guide recruitment and retention policy and assist in career counselling by providing greater insight into personality profiles that are best suited to certain professions.

4.3.2 Introduction

Very little is known about personality characteristics of allied health (AH) professionals and any potential influence of personality on career pathways, despite the large number of professions and diverse work undertaken by professionals considered to be AH. Holland's classic theory on job-person fit (Holland, 1997) argued that personality traits provide insight about the type of work to which an individual is best suited. Similarly, Sutin and Costa suggested that personality is influential in occupational experiences, as work is a core aspect of identity (Sutin & Costa, 2010). Research in other health professions, particularly medical specialities and subspecialties (Borges & Osmon, 2001; Taber et al., 2011; Vaidya et al., 2004; Wasserman et al., 1969), supports a relationship between personality traits and career choice.

Personality can be defined broadly as the 'dynamic organisation of the psychobiological systems that modulate adaptation to experience' (See Cloninger, 1994, p. 266). Every individual's personality is expressed through habits, skills, values and goals – all of which shape our experiences and decisions, including work choices.

4.3.2.1 Person and technique orientation

An emerging body of research on medical specialities discusses personality differences based on the concept of person-oriented (PO) and technique-oriented (TO) work (Borges & Gibson, 2005; Taber et al., 2011). First described by Yufit, Pollock and Wasserman (1969), the PO TO approach proposes that PO professions (e.g. paediatrician, physician) have a leaning towards people and the entire patient, focussing on the development of a therapeutic relationship (Borges & Gibson, 2005; Taber et al., 2011; Yufit et al., 1969), and a 'deeper personal and emotional involvement with patients' (Yufit et al., 1969, p. 91). In comparison, TO professions (e.g. anaesthetist, ophthalmologist) focus on technical skills, procedures and instruments (Yufit et al., 1969).

Yufit et al (Wasserman et al., 1969; Yufit et al., 1969) reported that the PO medical specialties of paediatrics, psychiatry and obstetrics-gynaecology scored more highly on traits of Nurturance, Intimacy and Autonomy, than radiology, pathology and ophthalmology, which had high ratings for Dominance, Order and Narcissism and low ratings for Autonomy and Dependency (Wasserman et al., 1969; Yufit et al., 1969). Supporting the notion of differences based on person or technique orientation, PO and TO medical specialties were found to differ on Rule-consciousness and Abstractedness (Borges & Osmon, 2001), and Dependence and Social Recognition (Borges & Gibson, 2005). This early work has been extended to argue that the perspective of person or technical orientation offers insight for

individuals in refining career choices (Borges & Gibson, 2005), and further that personality traits can predict PO or TO medical specialty choice (Taber et al., 2011).

The PO TO approach is germane to conceptualising the AH professions. AH comprises a number of diverse tertiary-trained professions providing specialised services aimed at diagnosis, treatment and prevention of acute and chronic health conditions. The professions are allied with each other in order to provide appropriate multi-disciplinary healthcare (Lowe et al., 2007; Mason, 2013; Turnbull et al., 2009). The TO or PO focus varies across professions (Turnbull et al., 2009). For example, a sonographer performing an ultrasound, a pharmacist dispensing medication and a podiatrist debriding a diabetic foot ulcer are undertaking professional responsibilities requiring a technical focus; compared with the PO focus of a social worker counselling a person involved in family violence, an exercise physiologist advising strategies to minimise an office worker's back pain or a speech pathologist working with the family of a developmentally delayed child.

Quality healthcare provision and professional standards require AH professionals to be both technically competent and to apply well-developed relationship skills such as communication in their specific work context (Lin, Beattie, Spitz, & Ellis, 2009). The PO or TO classification does not diminish the importance of technical and relationship competence for all health professionals or the preferred approach to relationships for individual AH professionals. The contribution of this approach is its conceptualisation of the core work of each profession (i.e. an orientation towards technique or person and a potential link with personality trends).

4.3.2.2 Personality findings in health professionals

Personality has been shown to differentiate between health professions in a number of studies (Borges & Osmon, 2001; Borges & Savickas, 2002; Hartung, Borges, & Jones, 2005; Jones et al., 2012; Taber et al., 2011). Rural Australian doctors were characterised by Openness (Jones et al., 2012), TO specialities (surgeons and anaesthetists) exhibited higher levels of Tough-mindedness than PO specialities (family practitioners) (Borges & Osmon, 2001), and anaesthetists were characterised by lower Openness and Neuroticism compared with other specialities (Markert et al., 2008).

Recent studies of personality in Australian rural doctors, nurses and medical students using the Temperament and Character Inventory (TCI) (Cloninger et al., 1993) found higher levels of Persistence, Self-Directedness and Cooperativeness compared with urban counterparts (Eley & Eley, 2011; Eley et al., 2011; Eley et al., 2009a, 2009b). Table 4-5 provides a

summary of findings on specific personality traits in healthcare professionals in studies using the TCI.

Table 4-5: High and low descriptors of temperament and character traits and key findings from the literature findings using the TCI in health professionals

Trait	Descriptors: Low and high scorers	Literature Findings
Novelty Seeking	Exploratory activity in response to novelty Orderly & reflective ↔ Exploratory & curious	Higher in: Trainee anaesthetists compared with specialist anaesthetists but lower in community GPs (Kluger, Laidlaw, Kruger, et al., 1999) Medical students planning to specialise in surgery, emergency medicine or obstetrics/gynaecology compared with those interested in primary care and paediatrics (Vaidya et al., 2004) Nurses than doctors (Eley & Eley, 2011) Australian GPs than average population norms (Eley et al., 2009b)
Harm Avoidance	Worry in anticipation of problems Bold & confident ↔ Worrying & pessimistic	Higher in: Australian specialist anaesthetists compared with physicians, surgeons and general practitioners (Kluger, Laidlaw, Kruger, et al., 1999) Medical students planning to specialise in primary care compared with those interested in surgery (Vaidya et al., 2004) Lower in: Rural physicians (Eley et al., 2009b) Medical students with strong rural intention (Eley et al., 2009a)
Reward Dependence	Dependence on approval of others Not influenced by others ↔ Needs to please	Higher in: Trainee anaesthetists compared with specialist anaesthetics (Kluger, Laidlaw, Kruger, et al., 1999) Nurses than doctors (Eley & Eley, 2011)
Persistence	Industriousness of behaviour despite obstacles Quitting & pragmatic ↔ Ambitious & industrious	Higher in GPs (Eley et al., 2009b) High in nurses (Eley et al., 2011)
Self-directedness	Responsibility, goal orientation and self-confidence Purposeless & ineffective ↔ Purposeful & reliable	Higher in: Rural doctors and nurses (Eley & Eley, 2011) Doctors than nurses (Eley & Eley, 2011) Medical students with strong rural intention than those with weaker rural intention (Eley et al., 2009a)

Trait	Descriptors: Low and high scorers	Literature Findings
Cooperativeness	Tolerance, cooperativeness & empathy Critical & unhelpful ↔ Empathic & compassionate	Higher in: Physicians and anaesthetists than normal population (Kluger, Laidlaw, Kruger, et al., 1999) Rural doctors and nurses (Eley & Eley, 2011) Rural intention medical students (Eley et al., 2009a) Physicians than anaesthetists (Kluger, Laidlaw, Kruger, et al., 1999)
Self-transcendence	View of self in relation to the universe as a whole Materialistic & practical ↔ Humble & spiritual	Lower in: Rural GPs (Eley et al., 2009b) Physicians and anaesthetists than normal population (Kluger, Laidlaw, Kruger, et al., 1999)

The literature describing personality in AH professionals or seeking to understand the influence of personality on AH professional career choice is scant. First year Australian students in both medical radiation science and speech pathology exhibited characteristics compatible with being a health professional (e.g. dependability and empathy). However, clear personality differentiation between the two groups was not evident (Adamson et al., 2003). Differences were found between practising physiotherapists (sensing-judging temperament) compared with occupational therapists (sensing-perceiving or intuitive-feeling temperament) (Lysack et al., 2001), medical laboratory scientists seemed to have a preference for working alone on highly controlled and predictable tasks (Dominelli & Wheeler, 2006) and some pharmacists self-selected work environments where the demand for patient contact was reduced (Cordina et al., 2012).

A recent study by the authors using the TCI reported AH professionals to be high or very high in personality traits of Reward Dependence, Persistence, Self-directedness and Cooperativeness compared to the general population; and those with experience working in remote areas were higher in Novelty Seeking than those without remote experience (Campbell, Eley, & McAllister, 2013). A qualitative study investigating AH professionals in rural or remote areas described qualities of independence, resourcefulness, flexibility, adventurousness, organisational ability and sensitivity to culture (Thomas & Clark, 2007).

Building on the literature showing links between personality and medical professions, this study aimed to provide a description of the personality traits observed in Australian AH professionals based on the person- or technique-orientation of the professions. It further asks if there are different levels of certain traits in the individual professions. The utility of this information for individuals and organisations to address career satisfaction, recruitment and retention will be discussed.

4.3.3 Method

The study was a cross-sectional design (self-report online questionnaire). Participants were Australian AH professionals recruited by snowball sampling through Services for Australian Rural and Remote Allied Health (SARRAH), the peak body for AH professionals in regional and remote Australia. However, AH professionals working across Australia were eligible to participate. (For more details, see Campbell et al., 2013)

4.3.3.1 Materials

Demographic data included profession, year of graduation, current work role, geographical classification of current work location, as well as gender, year of birth, marital status and dependants. Personality was measured using the Temperament and Character Inventory R-140

(TCI) (Cloninger et al., 1993), a self-report survey consisting of 140 Likert scale questions (1=definitely false, 5=definitely true).

The TCI was chosen because it is derived from a psychobiological model of personality and a theoretical perspective on how brain structure, brain organisation, and environment interact throughout development (Cloninger, 1994). It provides a measure of the dynamic personality configuration of healthy people. The TCI is empirically related to the Big Five model of personality (McCrae & John, 1992) and shares variance with all Big Five traits. It is widely validated (Grucza & Goldberg, 2007; Parker et al., 2003; Vaidya et al., 2004) and identifies the seven basic dimensions of personality by independently assessing inherited (temperament) and developmental (character) traits. According to Cloninger's psychobiological model, temperament is defined as those components of personality that are heritable, developmentally stable, emotion-based and not influenced by socio-cultural learning. Character traits reflect personal goals and values and are subject to socio-cultural learning (Cloninger et al., 1993) (See Table 4-5 for the trait descriptors).

4.3.3.2 Classification of PO and TO

The AH professions included in the study are listed in Table 4-6. An investigative consultation process was undertaken to understand each profession's core work and emphasis on PO and TO. It included extensive discussion with multiple experienced people from each profession, and discussion with government allied health advisors in regard to the best fit for each profession as PO or TO. Comparison with the literature (Borges & Osmon, 2001; Lowe et al., 2007; Turnbull et al., 2009) and examination of professional association and government career advisory (2012) internet information was used to triangulate the consultation information. Table 4-6 includes the final allocation of each profession to either the TO or PO group. It is acknowledged that for any individual the actual PO or TO demands may be influenced by the work context.

4.3.3.3 Statistical analysis

Demographic data and TCI trait scores were entered in SPSS 19 (SPSS Inc, Chicago, IL, USA) for analysis. Statistical analysis was descriptive of the whole sample, and comparative between PO and TO groups using independent samples *t*-test. Differences between professions ($p > 0.05$) were analysed using ANOVA (*post hoc* comparisons using Bonferroni's test) for professions where $n > 10$. Due to the small number of men in the sample, we included only women in the analysis of professions. Internal consistency (Cronbach's Alpha) of the TCI scales ranged from 0.76 to 0.89.

The University of Queensland Behavioural and Social Sciences Ethical Review Committee provided ethics approval (#2010000872).

4.3.4 Results

The whole sample ($n=562$) was largely female, partnered, and working in clinical roles in a range of geographical areas across Australia. The PO TO classification resulted in 492 participants in the PO and 70 in the TO groups. Table 4-6 shows key demographic variables with comparative data for the two groups, as well as the classification of professions as TO or PO. As previously reported (Campbell et al., 2013), women had lower levels of Harm Avoidance ($P=0.059$) and higher levels of Reward Dependence ($P=0.001$) and Cooperativeness ($P=0.008$).

Table 4-6: Demographic variables and classification by person-oriented or technique-oriented profession

Variable	Whole sample	PO group	TO group
No. women (%)	503 (89.5)	448 (91.8)	55 (78.6)
Mean age (years)	36.7 ± 11.2	36.6 ± 11.4	37.5 ± 9.9
Mean experience (years)	12.1 ± 10.1	11.8 ± 10.1	13.8 ± 9.8
No. with a clinical role	428 (76.2%)	384 (78.7%)	44 (62.9%)
No. partnered	406 (72.2%)	351 (71.6%)	38 (55.1%)
No. with dependants	211 (37.5%)	180 (36.7%)	31 (44.9%)
Aboriginal Health Worker*	3 (0.5%)	PO	
Audiologist*	4 (0.7%)		TO
Dietitian/Nutritionist	85 (15.1%)	PO	
Exercise Physiologist*	4 (0.7%)	PO	
Health Promotion*	8 (1.4%)		TO
Imaging	14 (2.5%)		TO
Medical Laboratory Science*	1 (0.2%)		TO
Occupational Therapist	94 (16.7%)	PO	
Optometry*	5 (0.9%)		TO
Oral Health*	3 (0.5%)		TO
Orthotics/Prosthetics*	3 (0.5%)		TO
Orthoptics*	1 (0.2%)		TO
Pharmacist*	8 (1.4%)		TO
Physiotherapist	105 (18.7%)	PO	
Podiatrist	23 (4.1%)		TO
Psychologist	48 (8.5%)	PO	
Social Worker	53 (9.4%)	PO	
Speech Pathologist	98 (17.4%)	PO	
Other*	2 (0.4%)	PO	
Total	562 (100%)	492 (87.5%)	70 (12.5%)

Note: Unless indicated otherwise, data are given as the mean ± s.d. or as the number of respondents in each group, with percentages in parentheses. PO, the profession was designated as person-oriented; TO, the profession was designated as technique-oriented.

* $n < 10$ therefore included in PO TO analysis but excluded from professions analysis

The whole sample means for each TCI trait are shown in Table 4-7. Compared with previously published population norms (Cloninger et al., 1994), the sample was high or very high in all personality traits except Self-transcendence which was low, and Harm Avoidance which was average. Comparisons of the means between the PO and TO groups using *t*-tests showed that Reward Dependence, Self-directedness, Cooperativeness and Self-transcendence were all significantly higher in the PO group.

Table 4-7: Comparison of temperament and character for the whole sample and by person or technique orientation

TCI Trait	Whole sample (n=562)		Mean scores for PO group (n=492)	Mean scores for TO group (n=70)	P value	Cohen's d (effect size)
	Mean score	Pop rank [†]				
Novelty Seeking	55.5±8.4	High [†]	55.6±8.5	55.0±7.7	0.555	-
Harm Avoidance	54.2±12.0	Average [†]	53.9±12.0	55.7±11.8	0.264	-
Reward Dependence	71.9±9.6	Very high [†]	72.3±9.4	68.7±10.6	0.004*	0.370 (small)
Persistence	72.4±9.5	Very high [†]	72.2±9.4	73.6±9.7	0.254	-
Self-directedness	77.4±10.0	Very high [†]	77.8±9.7	74.8±11.0	0.036*	0.300 (small)
Cooperativeness	83.4±7.3	Very high [†]	84.0±7.0	79.5±7.8	0.000*	0.610 (moderate)
Self-transcendence	45.0±11.0	Low [†]	45.5±11.0	41.1±10.9	0.002*	0.400 (small)

[†]Whole sample means ranked by population norms: This is the ranking of the whole sample mean for each TCI subscale against the published TCI normative percentile rankings for population norms. Very Low=0–16.7%; Low=17–33%; Average=34–66.7%; High=67–83.3%; Very High=84–100% (Cloninger et al, 1993) Data are the mean ± s.d. *P-values (P<0.05)

Using ANOVA to explore TCI mean scores between individual professions revealed that several PO professions exhibited a trend for higher levels in two character traits, Self-directedness and Cooperativeness (see Table 4-8). *Post hoc* tests indicated significantly higher levels of Self-directedness among professionals in psychology (PO) and social work (PO) compared with imaging (TO), dietetics (PO) and speech pathology (PO). Levels of Cooperativeness for imaging (TO) were significantly lower than for psychology (PO), social work (PO) and occupational therapy (PO). No other significant findings were detected.

Table 4-8: Mean (\pm s.d.) scores for Self-directedness and Cooperativeness according to profession

PO or TO classification	Profession	<i>n</i>	Self-directedness	Cooperativeness
PO	Psychology	42	82.7 \pm 9.9*	85.2 \pm 6.2†
	Social Work	43	81.3 \pm 7.5*	86.1 \pm 5.2†
	Occupational Therapy	89	78.2 \pm 8.1	85.3 \pm 6.1
	Physiotherapy	90	77.9 \pm 9.5	83.9 \pm 7.1
	Speech Pathology	97	76.4 \pm 10.3*	83.4 \pm 7.0
	Dietetics/Nutrition	79	75.3 \pm 10.9*	82.8 \pm 7.3
TO	Imaging	11	72.4 \pm 10.8*	77.5 \pm 6.8†
	Podiatry	17	75.3 \pm 8.4	80.5 \pm 9.1

* $F_{(7,460)}=4.2$, $P<0.001$; $\eta^2=0.06$ (medium effect size). † $F_{(7,460)}=3.76$, $P<0.001$; $\eta^2=0.05$ (small effect size)

PO: the profession was designated as being person-oriented; TO: the profession was designated as technique-oriented

4.3.5 Discussion

This study describes the levels of personality traits in AH professionals classified on the basis of the person or technique orientation of each profession. There is an emerging understanding of the PO TO classification and personality in medical professions (Borges & Gibson, 2005; Eley et al., 2009b) but very little in AH (Dodd et al., 2009). This is a major gap given the contribution of AH professionals to healthcare.

Our large sample represented a range of different AH professions working in mostly clinical roles across a variety of Australian workplaces and geographical regions. As a whole, the sample scored higher than population norms (Cloninger et al., 1994) on nearly all TCI traits, indicating an AH professional workforce with similar trends in personality traits to those found in medicine (Eley et al., 2009b; Eley et al., 2008) and nursing (Eley et al., 2012; Eley et al., 2011).

The PO and TO groups differed on several traits. For example, the PO group were higher in levels of Reward Dependence, Self-directedness, Cooperativeness and Self-transcendence compared with the TO group. This appears to be a logical fit. People who are more highly reward dependent and cooperative are more socially attached and tolerant, empathic and helpful. In general, PO professions are likely to be most effective in their work by developing strong, trusting and influential relationships with individuals (e.g. a dietitian recommending a change in eating habits). Their propensity to build relationships could also assist professionals who need to be in close physical proximity to patients for extended periods (e.g. a rehabilitation physiotherapist mobilising a patient). In contrast, the work locations of TO professions often physically or emotionally separate them from their clients (e.g. a pharmacist behind a shop

counter (Rapport, Doel, & Jerzembek, 2009), a medical laboratory professional reporting results over the phone, or a radiographer behind a radiation safety barrier (Niemi & Paasivaara, 2007)).

The findings support the *a priori* classification of each profession to the PO or TO group. For example, imaging (the largest group of TO professionals) were the most frequently different from those in the PO professions. Thus, the trend in personality traits of individuals is compatible with the orientation of that profession and suggests that individuals may be attracted to and find enhanced job satisfaction in professions that favour a similar personality pattern to their own.

The AH workforce is characterised by gender imbalance (Mason, 2013), and this was reflected in our sample. Gender differences found in our sample (Campbell et al., 2013) align with previously published TCI findings (Cloninger et al., 1993; Eley & Eley, 2011; Vaidya et al., 2004). This must be considered when looking at differences between professional groups and suggests potential for professions to be affected by gender-based differences, which will in turn influence the values, priorities and image of the profession (Conlon, Hecker, & Sabatini, 2012).

The differences we detected between PO and TO in levels of certain traits add new information to contemporary discussions on recognition of advanced skills within the AH professions. For example, workplace policy might designate a particular PO position 'specialist' if it required technical expertise beyond the usual scope of practice of that profession. Conversely, a TO position could be deemed 'specialist' if it required highly developed person-oriented skills. To illustrate, a pharmacist (TO) working in a predominantly cross-cultural environment could be recognised for advanced communication skills and cross-cultural competence. By comparison, a physiotherapist (PO) might be recognised for advanced technical expertise in managing specific conditions above and beyond the usual competencies and knowledge required. Understanding their personality trait patterns and gaining insight into their natural tendency towards people or technique is of practical importance to individuals. People considering an AH career could reflect on their personal preference for technical skills or a person-oriented focus when selecting between the professions. The PO TO classification may also provide insight to qualified professionals planning career specialisation (that may require additional technical expertise), or moving into management (requiring people skills).

Recruitment policy for short-term workforce in areas of need may also find the PO TO classification informative to help match professionals to their work environment. For example, professionals who undertake locums or short-term backfill need to be able to step into a workplace, effectively undertake the tasks and leave the results for the next professional to pick up. This may be more easily accomplished by TO professions as the outcomes of their work rely on successful and accurate task completion (e.g. providing quality x-rays or dispensing

medications). In contrast, PO professions must prioritise the patient relationship, building a holistic understanding of the patient and their context in order to be most effective. Typically, establishing this level of trust and insight takes a period of time. Regions that experience difficulties recruiting a PO workforce might wish to consider how the community could implement strategies that support the short-term PO professional to establish trusting relationships more quickly in order to capitalise on that professional's time with them. For example, in remote Aboriginal communities, utilising the influence of community elders and partnering with Aboriginal health practitioners and local staff (Thomas & Clark, 2007) may assist in promoting the healthcare services available from the AH professional.

Certain traits did not discriminate between the PO and TO groups. Novelty Seeking and Persistence were high and Harm Avoidance was average in both groups. This could mean that an individual's preference for either a PO or TO profession is not overly influenced by their levels of curiosity (Novelty Seeking), anxiety (Harm Avoidance) or drive (Persistence). It may further suggest that the AH professions are generally viewed as providing intrinsically interesting and varied career opportunities that are sufficiently challenging to satisfy high curiosity but not to the point of deterring someone with average levels of anxiety.

This work is exploratory. The conceptualisation of AH professions as PO or TO is potentially a continuum. The literature supports the notion that individuals are likely to self-select, or possibly be directed by managers, towards work roles that suit their individual inclination towards people or technique (Cordina et al., 2012). For example, a TO professional such as a rehabilitation audiologist, a behavioural optometrist working with special needs children or a medical radiation therapist may (in certain circumstances and depending on the clientele) need to be more people-oriented. Likewise, a PO physiotherapist working in a large Intensive Care Unit or a dietitian in food manufacturing may need to be technique-oriented. It is also possible that individuals intentionally seek skill development to better equip them for a new role. For example, a medical laboratory scientist who manages a large laboratory of junior staff may undertake training in communication and management to enhance his/her role and in doing so influence levels of certain character traits such as Cooperativeness. These exploratory scenarios demonstrate potential reasons for differences between professions and individuals. The PO TO concepts could be usefully applied to create policies and professional development programs that recognise and predict the career development needs of the AH professions and the individuals within those professions.

4.3.6 Limitations and further directions

Although the total sample was large, the subset of TO professions was considerably smaller than the PO professions. Additionally, some professional groups were small. Snowball sampling and a lack of comprehensive comparative workforce data (Mason, 2013) precluded the

calculation of a response rate. These limitations suggest caution in generalising the results, and further research in specific professions has potential to further refine the findings.

Further development of the PO TO classification could include investigation as to whether positions in specific geographical locations or requiring specialisation, demand emphasis on either PO or TO approaches. Individual AH professional opinion as to whether their own role was PO or TO would also be informative.

4.3.7 Conclusion

In conclusion, this exploratory research has examined personality in the AH professions from the perspective of the profession and its orientation to technique or people. It has also looked closely at personality trait similarities and differences between the professions. The findings have implications for employers and policy-makers in the selection, training and support of AH professionals to maximise workforce recruitment and retention. The findings have advanced our understanding of the dominant traits and trait patterns of AH professionals and introduced a new approach for describing the professions and individuals attracted to them.

4.4 Overall conclusion

In conclusion, this chapter has presented the results of the Strand 1 analysis of data from a large sample of Australian AH professionals. Using a recognised empirical personality measure, the TCI, it described the personal trait levels of AH professionals with and without remote experience, and presented the associations between gender, age, PO TO professional orientation, and specific profession trait differences. Further, it offered suggestions on how this information might usefully be applied to addressing recruitment and retention issues for the remote Australian AH workforce.

The next three chapters focus on Strand 2, reporting the results of analysis of data obtained from the repertory grid interviews. These results describe how the Strand 2 AH professionals construed themselves and other AH professional roles in terms of personal and motivation characteristics that contribute to work success, particularly in remote areas.

Chapter 5

Strand 2: Introduction and Sample Characteristics

5 Strand 2: Introduction and Sample Characteristics

The focus of this thesis will now move to Strand 2, the repertory grid interviews. This chapter will commence with a short descriptive overview of the sample itself, followed by two chapters, each using a different approach to analyse the repertory grid data. The first (Chapter 6) will analyse the constructs¹³. Using a qualitative approach, it will seek to understand how the participants construed themselves in various work roles, and others in allied health (AH) professional roles. The second (Chapter 7) will present an analysis of the elements¹⁴ using a statistical quantitative approach. It also includes a number of case studies to illustrate various subgroups in the sample.

5.1 Description of the sample

5.1.1 Selecting the sample

Over 200 Strand 1 participants indicated willingness to contribute to Strand 2. This large pool of potential participants enabled selection of a sample with a spread of professions, age groups, experience and work locations. In particular, selection criteria for remoteness included purposive sampling of participants whose current work location was RA4 or RA5¹⁵. As described in Section 3.4, snowball recruitment was used to recruit novices¹⁶ working in RA1¹⁷.

5.1.2 Sample description

Thirty-four AH professionals dispersed across Australia completed repertory grid interviews (Jankowicz, 2004; Kelly, 1955a) and reviewed both their completed grids and interview transcripts following the interviews. The Strand 2 sample was 91% female (31/34), reflecting the Strand 1 gender distribution.

As shown in Table 5-1, the distribution of the Strand 2 sample by profession also largely reflected the Strand 1 sample.

¹³ In this study the constructs were the statements of belief or personal understanding developed by each participant as they compared the elements, the various allied health roles.

¹⁴ The elements were work roles held by allied health professionals. In repertory grid interviews, comparing elements reveals the individual's constructs about those elements.

¹⁵ RA4 and RA5 refer to Remote and Very Remote using the Australian Standard Geographical Classification of Remoteness Areas (Australian Institute of Health and Welfare, 2004).

¹⁶ Novices in this thesis refers to allied health professionals with less than three years' professional experience.

¹⁷ RA1 refers to major cities using the Australian Standard Geographical Classification of Remoteness Areas (Australian Institute of Health and Welfare, 2004).

Table 5-1: Comparison of the distribution of professions in Strand 2 with Strand 1

Profession	Strand 2	Strand 1
	<i>n</i> =34 (% of <i>n</i>)	<i>n</i> =562* (% of <i>n</i>)
Physiotherapy	8 (23.5)	105 (18.7)
Speech Pathology	8 (23.5)	98 (17.4)
Dietetics	6 (17.6)	85 (15.1)
Occupational Therapy	4 (11.8)	94 (16.7)
Social Work	4 (11.8)	53 (9.4)
Psychology	2 (5.9)	48 (8.5)
Podiatry	2 (5.9)	23 (4.1)

*Note that this column does not include all Strand 1 professions; for comparison purposes it includes only those who were represented in Strand 2

5.1.3 Age and experience

The mean age of Strand 2 participants (32.9 years) was slightly lower than the mean age of Strand 1 participants (36.7 years). The difference was due to the inclusion in Strand 2 of urban novice participants who comprised approximately a quarter of the total sample. Table 5-2 shows the distribution of age, remoteness of work location and experience level of Strand 2 participants.

Characterising participants by experience in remote areas was challenging as the categorisation needed to account for experience in their profession as well as experience in remote areas. Novices were participants with less than three years' professional experience. Early Career Remote were either participants with many years of professional experience who had recently commenced working in remote areas, or participants who had worked in remote areas for 3-5 years. Experienced Remote were participants with more than five years' experience in remote areas. Consistent with Strand 1 methodology, Strand 2 participants were classified by the most remote location at which they worked. Note that no experienced urban participants were included because the focus was to understand the construing of AH professionals (novice and experienced) already working in remote areas, and of those novices who may potentially be recruited to remote areas from urban areas. While it is possible that experienced AH professionals may relocate from urban to remote areas, this additional group was not included in the sample.

Table 5-2: Age, location and experience characteristics of Strand 2 participants

Variable	Strand 2 <i>n=34 (%)</i>
Age	
18-30 years	22 (64.7)
31-45 years	7 (20.6)
46+ years	5 (14.7)
Location	
RA1	10 (29.4)
RA4	6 (17.6)
RA5	18 (52.9)
Experience	
Novice Urban	9 (26.5)
Novice Remote	10 (29.4)
Early Career Remote	6 (17.6)
Experienced Remote	9 (26.5)

5.1.4 Geographical distribution of sample

Figure 5-1 shows the diverse locations around Australia of Strand 2 participants at the time of interview. As can be seen, participants were spread across every mainland state. The markers on the map indicate participant office location. In some cases, more than one participant was located in a particular town. However, the map does not provide this information in order to protect the anonymity of the participants.

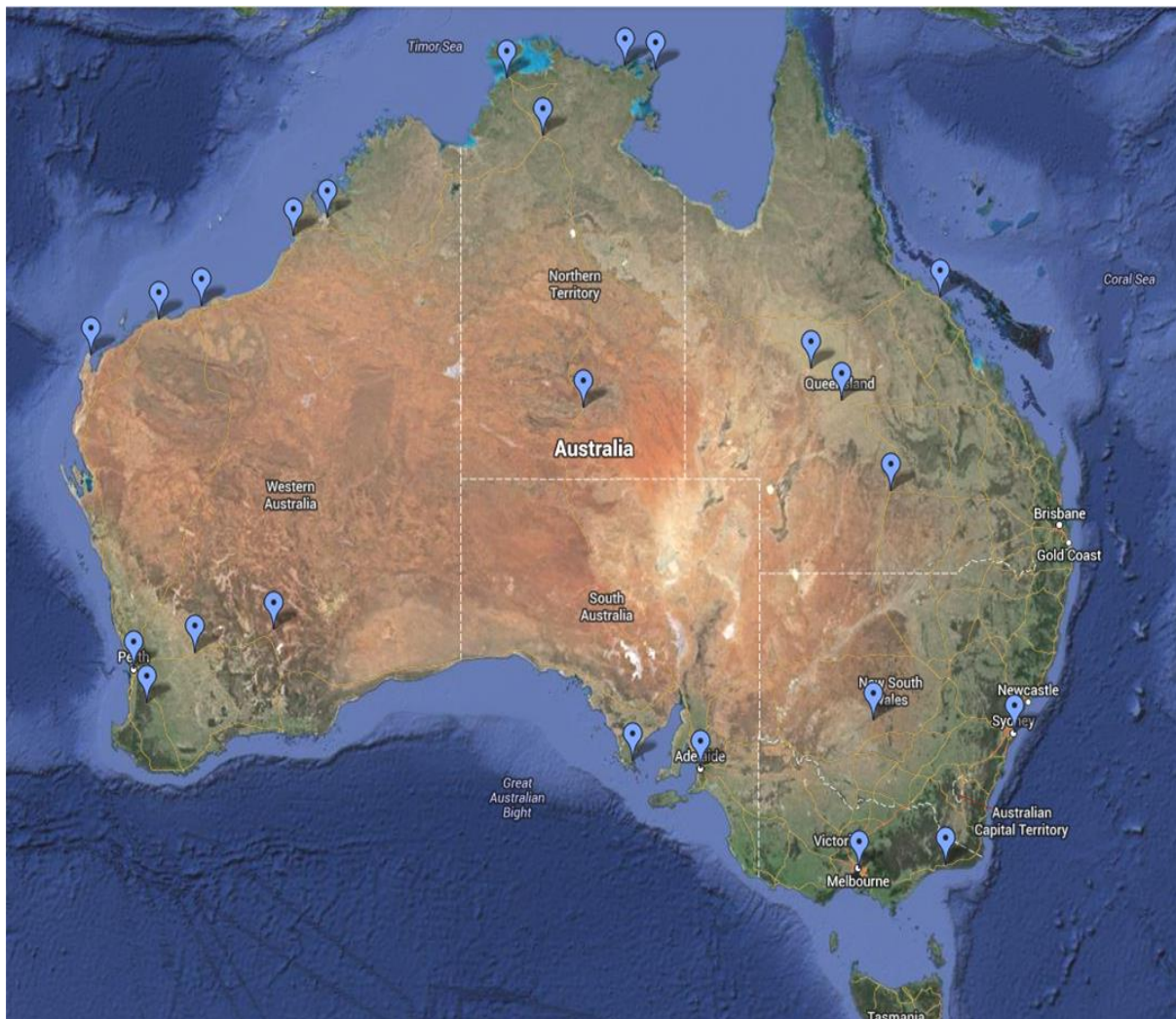


Figure 5-1: Map of location of participants at interview

Participants working in RA4 and RA5 typically provided services to large geographical areas well beyond their office locations, although the interview protocol did not include sufficient detail to be able to map this. Participants usually drove or flew by light aircraft to the other locations in their regions to provide services. The quote below is typical of the travel requirements for participants working in remote areas, although some participants provided services to more than two towns and therefore had a more varied travel program.

My job there was doing outreach services to two towns, B and W. So Monday I would drive out 200 kilometres to B, stay overnight, do clinic for 2 days, then drive back. Wednesday I would drive 200 kilometres in the opposite direction to W, spend a night there and do clinics and then drive back to [my office] and generally do a paper day or half day clinic on Friday.

In addition, a number of participants had worked in other remote areas of Australia prior to their positions at time of interview. Overall, the remote experience of the participants was extensive in both geographical distribution across Australia and years of experience.

5.1.5 Self-assessed work location and ‘suitedness’

Participants were asked to indicate their current work location, including intention to work in remote areas if not currently located there, as well as self-assessed ‘suitedness’ for remote work. A map of the Australian Standard Geographical Classification of Remoteness Areas (ASGC-RA) remoteness areas (Department of Health and Ageing, 2009) was provided to assist participants with understanding remoteness. While no definition of suitedness was provided, it was considered that participants would answer this from a common sense approach regarding whether the work location met personal standards of satisfaction and convenience, i.e. the perceived ‘fit’ between the individual and their work environment. This approach and terminology is in keeping with Dimitrovsky et al. (1989) who examined self-assessed suitedness, personality and perceived success in army roles.

The four combinations of current work location and suitedness reported by participants are shown in Table 5-3. Note also the third column containing the shortened variable names. These abbreviations will be used in the results presented in the following chapters.

Table 5-3: Participant self-assessed suitedness for and intention to work in remote areas (RA4 and RA5)

Self-assessed work location	Self-assessed suitedness	Shortened variable name	Strand 2 n=34 (%)
I am working in remote	Working remotely suits me	Am/Suits	23 (67.6)
I am not working in remote	I might work in remote one day. I think it would suit me	Not/Might	6 (17.6)
I am not working in remote	I won’t work in remote. I don’t think it would suit me	Not/Won’t	4 (11.8)
I did work in remote but I am not any longer	I won’t work there again. It suited for a while	Did/Won’t	1 (2.9)

Figure 5-2 summarises the demographic characteristics of the Strand 2 participants. All characteristics are presented as percentages of the entire sample of 34.

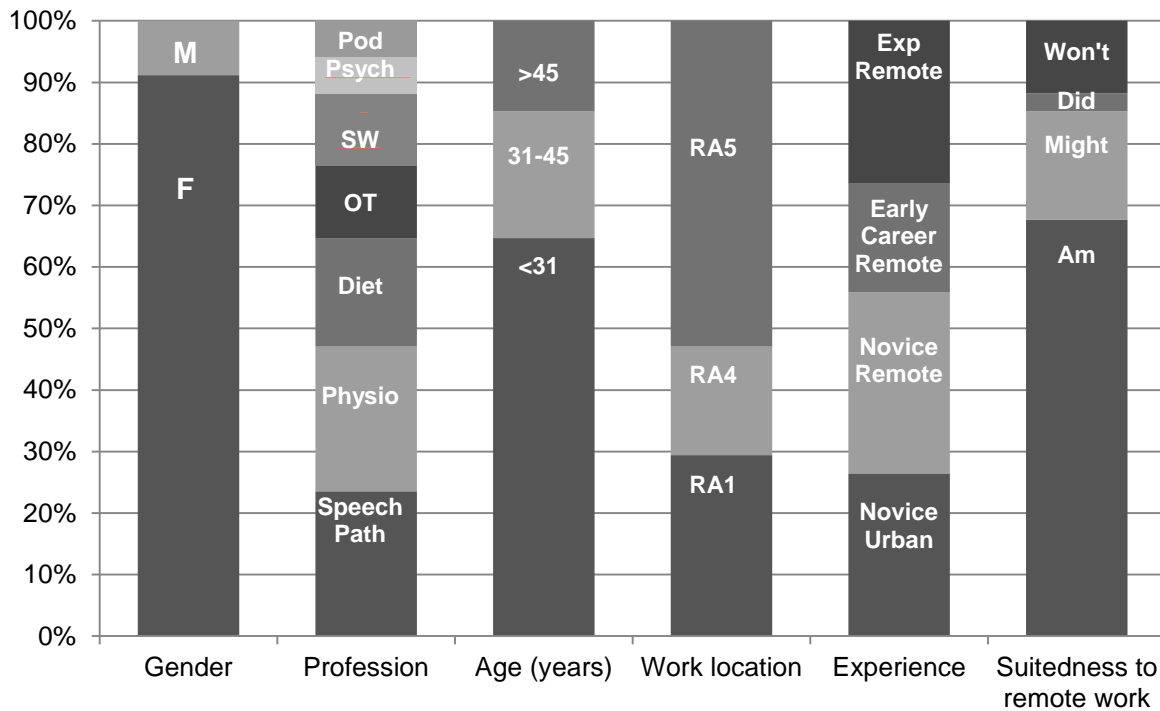


Figure 5-2: Summary of sample characteristics

5.2 The repertory grid interview elicitation

Mean interview length was one hour and forty minutes. The interview length was likely extended by the non-face-to-face nature of the interview. As well as building rapport, confirming consent, and explaining the interview process, the first 15-20 minutes were occupied by tasks related to the use of technology in the interview. This included ensuring that the technology was working so the interview grid was visible, familiarising the participant with the grid and negotiating the elements as described in the methods. Elicitation of constructs generally took about an hour, a length which is typical of repertory grid interviews (Saúl et al., 2012). Six participant interviews required two sessions. Interviews generated between seven and thirteen constructs, with the mean number of constructs being ten. A total of 334 bipolar constructs were developed.

Participants were engaged, thoughtful and focussed during the interviews, despite being on teleconference rather than face-to-face. Several made comments that they valued the repertory grid interview where the interviewer did not have prior assumptions about working in remote areas. Some also commented that the interview had helped them articulate career plans and workplace issues more clearly than they had previously been able to. For some it had felt like therapeutic de-briefing (*'Now that I have that off my chest'*).

From a personal perspective, as the researcher I had a genuine curiosity to understand the construing of participants and to use their words not my interpretation. When writing my journal¹⁸ and transcribing after each interview, I heard myself making comments like, 'Ah, I see what you are saying'. Participants were quick to correct me as the researcher if I made comments that demonstrated a misunderstanding of their constructs.

As described in the methods, the data presented in Chapters 6 and 7 comprise the repertory grid elements, constructs and ratings, as well as the interview transcripts. It is important that the reader remember that constructs are the actual words used by the participants in describing how they construe the elements (Fransella et al., 2004; Jankowicz, 2004; Kelly, 1955a). Essentially, the constructs represent comparisons between the elements, in the words of the participants. The interview transcriptions provided additional examples to illustrate the constructs. Thus, both the examples from the interview transcripts and the constructs themselves are the words of the participants.

5.3 Missing data – elements and ratings

Within repertory grid research, missing elements do not necessarily constitute missing data in the usual sense because each matrix of ratings is a dataset in its own right and can be analysed on its own merit (Jankowicz, 2004; Kelly, 1955a). When comparing across multiple grids, missing elements only become problematic if the particular analysis requires matching of all elements across grids (Grice, 2007a). None of the analyses used in this research design requires this level of matching. Therefore, all grids were included in data analysis. Further, all 34 grids included and rated the elements of most interest (*Ideal, Current, SuccessfulRemote, NoviceRemote, HospitalOther*) to this analysis.

Occasionally, participants did not personally know an AH professional for a particular element. As per the methodology (Fransella et al., 2004), when an element was not personally known, a generic professional was negotiated. Several specific examples of this are described in the next chapters.

Occasionally, participants reported that a particular construct did not apply to a specific element, and therefore they were unable to rate that element on that construct. As some statistical analyses do not permit missing values, in those instances the midpoint of the scale (i.e. 3) was imputed, as described by Grice (2002). Only 0.34% of the total ratings were missing, which is a very small proportion of missing data (Grice, 2002).

¹⁸ Keeping a journal is not a routine characteristic of repertory grid interviewing however its purpose in this research, given the large amount of data being collected, was to consolidate my reflection after each interview. It allowed me to capture any additional information regarding the complexity of the interview that might not have been obvious from the transcript but which might be of later use in understanding the construing of the participants.

5.4 Conclusion

This brief chapter has presented an overview of the Strand 2 sample and shown how the Strand 2 sample mirrored the Strand 1 sample across key demographic characteristics. The suitedness and location self-categorisation of the sample explained in this chapter is used in analysing the results of the interviews.

The results of analysis of data from the 34 repertory grid interviews, i.e. the constructs, elements and ratings, will be presented in Chapters 6 and 7. Chapter 6 will analyse the constructs from a qualitative perspective, while Chapter 7 will analyse the elements from a quantitative perspective. The repertory grid interviews produced a large amount of data, and the results of the analyses will show how the sample construed working in remote areas.

Chapter 6

Strand 2 Results: Content Analysis of the Constructs

6 Strand 2 Results: Content analysis of the constructs

The results presented in this chapter reveal the construing of the Strand 2 participants in relation to personality and motivation traits that influence work success. The topic of the interview, the main question that guided the elicitation of the constructs during the repertory grid interview, was: 'What are the motivation and personality characteristics that contribute to success at work?' The repertory grid interviews were not designed to show one work environment and the professionals who work there as superior or 'better professionals'. Rather, they aimed to reveal how the participants construed their own work and workplaces, and the work and workplaces of colleagues. This information can be applied to recruitment and retention of allied health (AH) professionals well-suited for working in remote areas.

As suggested by Jankowicz (2004), the unit for content analysis is the construct. However, the chapter will draw on three types of data created during the repertory grid interview.

1. The bipolar constructs¹⁹ developed by participants using their own words and revealing their construing about the elements²⁰
2. The ratings²¹ of the elements by participants on each of their constructs
3. Participant interview transcripts for examples that illustrate the constructs.

By developing constructs and then rating the elements on those constructs, participants provided insight into their construing of the elements. This chapter will provide a qualitative analysis, particularly seeking to understand and compare how participants construed four elements: the *Ideal*, the *SuccessfulRemote*, the *NoviceRemote* and the *HospitalOther* (see Figure 6-1).

The *Ideal* element literally represented each participant's conceptually ideal job. The *SuccessfulRemote* element revealed participant construing about someone they perceived as successful in a remote environment, while the *NoviceRemote* element provided insight into the role played by experience (or inexperience) in remote work. The (largely) urban-based element labelled *HospitalOther* provided the opportunity to understand how working in acute care was construed. Comparing the ratings across the elements reveals perceived similarities and

¹⁹ Constructs are statements of belief or personal understanding about a topic. They are bipolar, representing two ends of a continuum of belief.

²⁰ In this study the elements were work roles held by AH professionals. In repertory grid interviews, comparing elements reveals the individual's constructs about those elements.

²¹ Participants rated each construct for each element on a scale of 1-5 indicating the end of the construct continuum the element was most like.

differences between work locations and potentially highlights areas for change that may assist the recruitment and retention of AH professionals to remote areas.

	<i>Ideal</i>	<i>SucRemote</i>	<i>NovRemote</i>	<i>HospitalOther</i>	
Holistic approach	2	2	1	2	Specific condition approach
Results-oriented	5	4	4	3	Patient-centred
Hierarchy in team	5	5	4	4	Team members valued
Generalist expertise	2	2	2	3	Detailed specific expertise
Empowering	1	1	2	3	Judgemental

Figure 6-1: Example of a grid showing the elements compared in this chapter

6.1 Overview

This chapter commences with an overview of the codes that emerged from the content analysis of the constructs (Holsti, 1968; Jankowicz, 2004). These codes constitute a framework for making sense of the constructs and provide insight into the prominence of certain codes. This framework then guides the following sections where each code is individually discussed.

Each section will follow a similar format. It will commence with a definition and summary information specific to that code. This will be followed by a table summarising the data for the code, i.e. the constructs attributed to the code, summary of the ratings for the four elements being compared, and several exemplar constructs as evidence for the code. The table will also show the spread of constructs in the code according to the four self-assigned participant categories explained in Table 5-3 and that account for experience in remote areas²²; and self-assessed suitedness to remote areas²³. These will be abbreviated to Am/Suits; Did/Won't; Not/Might; Not/Won't.

The information included in each table demonstrates the rich insight that can be gained from repertory grid interviews. **The constructs offer detailed qualitative perspectives, while the ratings provide a summary across participants of the extent to which the construct applies to the elements.**

²² See Table 5-3: I am currently working/did work/am not working in remote areas

²³ See Table 5-3: Working remotely suits me/I might work in remote one day. I think it would suit me/I won't work in remote, I don't think it would suit me/I won't work there again, it suited for a while.

The table will be followed by further description and verification of the code, including differences and similarities in construing about, and by, remote and urban AH professionals. The repertory grid interview transcripts will provide further examples and evidence for the code. It will particularly discuss points that could drive policy change to make a difference to recruitment and/or retention.

Throughout the chapter, constructs will be referenced using the pseudonym of the participant and the number of the construct. For example *Louise6* refers to the sixth construct developed by Louise. Interview quotes are referenced by the pseudonym, relevant construct and line number, e.g. *Louise2.266*. Quotes from the beginning of the interview and not specific to a construct will be referenced as zero, followed by the line number, e.g. *Trish0.149*.

6.2 Coding framework

All constructs were assigned to a code created through the boot strapping process (Holsti, 1968) (see Chapter 3), as well as to one of two categories: attributes of the work environment (Terjesen et al., 2007); or personal attributes of the AH professional (Wilson & Retsas, 1997). For example, *Wide opportunity to specialise (Louise6)* indicated a workplace attribute that facilitated specialisation; in comparison, *Motivated by people (Chloe12)* indicated a personal attribute related to motivation. The wording of the construct indicated whether it was a workplace or personal attribute. This distinction is important in thinking about where change may usefully be implemented in order to improve recruitment and retention success. Policy can support required workplace change, whereas modifying or managing personal attributes is the responsibility of the individual AH professional. Having insight into the workplace characteristics of their preferred workplaces, as well as their own personal attributes, can potentially assist individuals and managers in achieving a good fit between the AH professional and the workplace.

Table 6-1 provides an overview of the codes aligned with the framework of workplace and personal attributes. The first column in the table lists codes containing constructs categorised as workplace attributes. The third column lists codes containing constructs categorised as personal attributes. The middle column lists codes where the constructs for any one code were categorised as both workplace and personal attributes.

Numbers in brackets in Table 6-1 indicate the number of constructs assigned to that code. The codes are ordered from highest to lowest frequency counts. Placement of a number on the left or right side of a code indicates the number of codes related to workplace or personal codes respectively. Numbers on both left and right sides of a code indicate that constructs related to both categories were assigned that code.

Table 6-1: Overview of codes assigned to constructs

Work environment attributes	Codes overlapping workplace and personal attributes	Personal attributes of the allied health professional
(18) Autonomy	(12) Patient Relationships (28)	Motivation (35)
(14) Role Value (1)	(22) Expertise (7)	Approach to Culture (32)
(9) Professional Isolation (1)	(10) Support and Supervision (10)	Driven (15)
(9) Professional Development	(7) Flexibility (8)	Managing Time (9)
(8) Travel (2)	(4) Colleague Relationships (15)	Philosophical Commitment (9)
(7) Service Orientation	(6) Career Development (8)	Independence from Significant Others (8)
(3) Workplace Stability	(3) Dual Roles (5)	(1) Job Satisfaction (7)
		Reflective (7)
		Professional Confidence (6)
		Adventurous (5)
		Optimism (5)
		Authenticity (2)

The following three sections will address each of the columns in Table 6-1 and describe and discuss the constructs attached to the codes in the columns.

6.3 Construing the attributes of the work environment

The purpose of this section is to better understand the attributes of the workplace and the potential influence this has on recruitment and retention of AH professionals to remote areas. **Each of the seven codes listed in the first column of Table 6-1 will be presented.**

6.3.1 Autonomy

Autonomy was described in terms of workplace attributes and therefore is outside the direct control of the AH professional. Eighteen constructs were assigned to this code. As a code, Autonomy included concepts of case load management, implementation of policy, and self-regulation in regard to quality of work. The ratings for the *Ideal*, as seen in Table 6-2, indicate that Autonomy was highly valued.

Table 6-2: Constructs, ratings and exemplar constructs coded to Autonomy

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Bianca14, Chloe13, Dimity9, Deanna5, Faye3, Ingrid4, Kathleen1,3,6, Kirsty2, Kerrie9, Lena7, Nicole11, Rhys1, Trish1,4 Not/Might: Danielle2, Louise8	Strongly autonomous	Strongly autonomous	Less autonomous than <i>SuccessfulRemote</i> but more than <i>HospitalOther</i>	Constrained by bureaucracy, with limited autonomy

Bipolar construct examples

Autonomy: reliant on making my own decisions and being able to think outside the square ↔ Constrained by bureaucracy, medical profession, policy, ingrained hierarchy of control. Faye3

Independence and flexibility in work, autonomy in role, manager is at a distance ↔ Working in a regimented way determined by the organisation's policy. Lena7

Flexibility to interpret policy and procedures based on clinician view of community need ↔ Rigid policies which must be followed by clinicians and community need often determined by managers and policy developers. Bianca14

As can be seen from the example constructs, one pole²⁴, one end of the construct continuum, focussed on being in control, independent, and able to make decisions about work hours, duties, models of care, and direction of work. While Autonomy was conferred by the workplace and valued by participants, this placed responsibility and accountability for quality of practice on the AH professional. As Nicole explained:

You are often left to your own devices so you have to be self-motivating and that. It is yourself pushing to keep things changing and improving ... In my particular job I have a primary health manager but I am ... not required to give account of myself at all. You are sort of responsible for ... doing a satisfactory job.
 Nicole11.625

In comparison, the other end of the construct continuum, the contrast pole, emphasises circumstances where the AH professional does not have decision-making authority. Instead, workplace practices are autocratic and policy- or protocol-based; or decisions are made by management not the AH professional. In some cases, constructs included emotive words like constrained (Danielle2), controlled (Ingrid4), hamstrung (Deanna5) or regimented (Lena7). In these instances, processes take precedence over professional discretion (Rhys1), and the medical profession was construed as more powerful in the decision-making hierarchy. Faye, a long-term remote AH professional, valued autonomy and felt disrespected when the medical profession failed to recognise her contribution to patient care.

²⁴ Constructs are on a continuum, and thus they are bipolar. We make sense of the world by 'noting likeness and difference' (Fransella, 2005, p. 8). It is the likeness and difference which creates the two ends of the continuum for that construct.

The doctors telling you what you can and can't do, that frustrates me completely.
Faye3.76

The *Ideal* ratings indicate that participants value Autonomy and construe the *Remote* elements as more autonomous than *Hospital/Other*, who were seen to be bound by bureaucracy. As Rhys described:

They don't get to choose where, how often they see people; it is just 'This is how long you have got'. It is just a 'pump it through' sort of scenario. Rhys1.67

Possibly the *NoviceRemote* has less Autonomy because of their inexperience. Boundaries on their practice, in the form of protocols, could be intended as supportive and improving patient safety. While this may be helpful for a new graduate, for experienced professionals these protocols fail to acknowledge clinical experience and expertise and therefore seem inappropriate, stifling or potentially money-wasting.

I was just thinking of one practitioner in town who has just told her young graduate that they are going to do an [specific investigative test] on everybody ... Well, I would be very offended by that because I can look at a patient and know that I don't need to do that test on that patient. So it would be choosing what tests are appropriate rather than being given a blanket policy. Trish1.149

In summary, Autonomy was valued by participants and construed as a prominent attribute of the remote work environment.

6.3.2 Role Value

Role Value refers to how AH professionals construe the valued placed on their work by others, including colleagues, direct line managers and more senior staff. The normal work day included interactions with AH colleagues from the same or different professions, nurses, doctors and administration staff. This code covers the quality of those interactions. It includes concepts such as respect and appreciation, and is discerned by the way the AH professional is treated in the workplace.

Table 6-3 summarises the constructs coded under Role Value. The *Ideal* ratings show that AH professionals prefer roles that are well-regarded and appreciated. The table also shows that the *Remote* elements were construed as less valued.

Table 6-3: Constructs, ratings and exemplar constructs coded to Role Value

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Bianca8, Chloe9, Dimity8, Deanna7,9, Leila7,8, Rhys6, Ingrid7, Tania1,2	Role somewhat valued, respected, appreciated	Role not valued, respected, appreciated	Role valued, respected, appreciated	Role valued, respected, appreciated
Not/Might: Ben3, Louise7				
Not/Won't: Olivia5, Teagan6				
<i>Bipolar construct examples</i>				
<i>Role is valued by other health professionals ↔ Role is not valued and so AH professional has to 'sell' it. Chloe9</i>				
<i>Perceive themselves to be valued by colleagues ↔ Perceive themselves to not be valued in their work environment by professional peers and managers and team within your organisation. Ingrid7</i>				
<i>Profession's role and value is well understood ↔ Need to advocate for profession's role and value. Olivia5</i>				

Examples of actions by colleagues that were construed as validating the professional skill set of participants included receiving appropriate referrals (Leila7, Tania1) and having colleagues understand and promote their skill set to others (Olivia5). Communication that respected profession-specific recommendations (Ben3, Deanna7) also confirmed the sense of making a valuable contribution. Ben stated that increased time in the workplace assisted in establishing role value, and Danielle believed that professional credibility relied on strong interpersonal skills.

You really need to be able to talk to people and find out how they can work with you and you can work with them. Interpersonal skills are about not being intimidated by people in power and this will make you more successful in your work. Danielle7.107

Failure by peers and managers to recognise profession-specific skills reduced participants' sense of being valued (Deanna7). This appeared to be more problematic for participants working in remote than urban areas, and particularly for the *NoviceRemote* who received a number of extreme ratings. For example, as a novice working in a remote team with no profession-specific support, Deanna found her professional expertise was questioned.

I don't feel very valued by particular people in the organisation because I have had to fight really hard to justify the assessments that I use. Deanna7.402

Another layer of the role not being valued was reported for *Remote* AH professionals providing services to remote Indigenous communities. The turnover of resident clinic staff, combined with the intermittent nature of the AH professional's visits to the clinic, meant that they were construed as needing to continually educate about and advocate for their role (Tania1, Olivia5). This diminished their sense of providing longer-term gains for the community.

We are dealing with clinics who really have no idea what we are doing and not referring and so most of our job ... is just getting the word out there about what we do. Leila7.580

Actions such as not filling vacant positions were perceived by participants as also discounting their professional expertise and importance.

With my pending departure, I am leaving a bit earlier than some other people. So they are just saying, 'Oh well, kids can just miss out on your assessments because really you don't diagnose that many kids with problems'. Deanna7.404

A defined role appeared to make work easier. Dimity explained that AH professionals with a more defined role also had more respect from the other team members. Looking at element ratings, defined roles appeared to be those in established healthcare services including hospitals and, to some extent, private practitioners.

They understand our role. Olivia5.353

By comparison, lack of role definition in the remote setting, combined with a visiting role²⁵ and remote health clinic staff accustomed to providing services without AH support, affected the attitudes of both clinic staff and patients. Participants described some remote health service professionals as providing health care without reference to the visiting AH professional, and patients preferred the doctor over the AH professional. Dimity reported patients as having the attitude of: *'I want to see a doctor instead'*. (Dimity8.839)

Undefined roles appeared to be associated with holding unrecognised specialised skills. Public health nutritionists and social workers were particularly mentioned as having broad and undefined roles where the long-term nature of their work appeared to work against easily establishing their worth using 'quick fixes'.

It is very hard to have strong outcome measures ... and you don't see the results for years. So it is hard for those particularly who aren't health professionals, to respect it. Dimity8.804

Further, some *remote* participants recognised that their reputation extended beyond their professional-specific expertise to their ability to define their role based on what the community wanted.

In the remote setting ... people might not be ready for allied health, and have different priorities. So you have to actually define your role in each community. When I was working in different communities I did very different things in each community based on what they had there and what they were up to. Whereas in the metropolitan setting you are given a role. Deanna9.469

²⁵ Fly in/fly out or drive in/drive out roles, sometimes known as Hub and Spoke service model, rather than the AH professional residing in the community

Role Value also incorporated inclusion in or exclusion from decision-making and was influenced by workplace governance, for example, the value placed on team members' opinions compared with domination by a medical hierarchy or autocratic senior manager. Value was signalled by participation in decision-making (Dimity8) and recognition for workplace contributions (Bianca8).

*They give the direction but how I actually get to that direction is my decision.
Dimity8.886*

Perceived status of the role was influenced by being specialised (Louise7) and by the way the team operated (Bianca8, Ben3, Ingrid7, Leila8, Rhys6, Teagan6).

You feel like you have a sense of worth within your workplace because people identify your good work. Bianca8.274

The ratings indicated the novices were construed as least respected. In this sample the novice AH professionals were generally young and female, working from a position of low power (Hofstede, Hofstede, & Minkov, 2010). In a typical urban hospital there is an established hierarchy, with senior medical professionals making patient care decisions that may or may not be inclusive of the opinion of the AH professional. Additionally, the novice's lack of experience may contribute to a sense of imposter syndrome (Clance & Imes, 1978) where they feel their skills and knowledge do not match what is required. Chloe described it as:

I'm limited by my own views on what I'm capable of doing and just not sure of what I'm actually doing right now ... I have a pretty low ... belief in myself and what I can do. Chloe3.245

Leila pointed out that she and a novice colleague were also setting up new services. In this instance, the remote community was serviced by the professionals with the least experience and the least support to manage the challenges.

I am a new grad who is stepping into something that has never been done before, and I am with another new grad who is stepping into something that has never been done before. Leila7.575

For some participants, the stereotyping associated with looking or being young, and being known as 'from the city' also contributed to difficulty in gaining traction and influence for their profession and their patients. An attitude of resilience coupled with increasing confidence helped.

It's not only that the role is not valued but you're not valued as a person because they will just look you up and down and think, oh you know, "Young girl from the city, what's she going to do out here? What could she know?" ... I'd take it really personally initially but now I'm just like, "Well, too bad, this is what you get. So wait and see" ... I'm getting more confidence ... [they see] a value in the service. Chloe9.703

Overall, the ratings showed a trend where participants construed the *HospitalOther* as respected and valued, the *SuccessfulRemote* as somewhat valued and respected, and the *NoviceRemote* as not valued or respected. This is an alarming finding if it is widespread across novices in remote areas. Given that many new graduates take positions in remote areas, this finding requires policy consideration. A lack of feeling appreciated and having to constantly re-explain yourself and your role will likely result in high turnover and not promote long-term retention (Campbell et al., 2012; Randolph, 2005).

6.3.3 Professional Isolation

The defining feature of the constructs allocated to Professional Isolation was access to same-profession colleagues. This code referred to workplace rather than personal attributes but does link with the code of Support and Supervision, which will be discussed later. Professional Isolation has been previously reported in the literature as problematic (Devine, 2006).

The *Ideal* was construed as not isolated. The *HospitalOther* was construed as having both a supportive team and same-profession support, whereas the *Remote* positions frequently did not have same-profession support. This was articulated by Leila and seen in the ratings summary in Table 6-4.

In the hospital you are surrounded by others [from your profession]. So you can go and ask them questions and it is really acceptable to just ring up another hospital and ask them. Whereas out here, it probably is still acceptable but it just doesn't happen as much as when I was in a hospital position. But you are out here by yourself. Leila6.450

Table 6-4: Constructs, ratings and exemplar constructs coded to Professional Isolation

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Fiona4,5, Faye4, Leila6, Philippa9	Not professionally isolated	Access to a supportive team but not necessarily same-profession support	More isolated than <i>SuccessfulRemote</i>	Access to a supportive team and often same profession
Not/Might: Louise4,8, Karla3				
Not/Won't: Laura5, Teagan3				
<i>Bipolar construct examples</i>				
<i>Same-profession support and interaction/contact is accessible ↔ Isolated and lacking in same-profession contact</i> Fiona5				
<i>Support is easy to access and readily available ↔ Not supported, more stressed because of that and feeling isolated</i> Karla3				
<i>Access to a team of allied health, nursing and medical staff to answer questions and provide information on patient management ↔ Isolated because they don't have access to others [from their profession], allied health or medical team</i> Louise4				

Professional Isolation in remote areas was recognised as an issue by urban-based novices (Louise4, Laura5, Karla3, Teagan3), as well as remote professionals themselves (Fiona4,5, Faye4, Leila6, Philippa9). In talking about her current position in a major urban hospital with ready access to same-profession peer and senior support, Karla reflected on remote professionals and said: *'I can imagine you would feel isolated.'* Karla3.379

Fiona, a very experienced and long-term, very remote professional went to considerable personal inconvenience to reduce her professional isolation. Although her work already comprised several part-time positions, she intentionally took a job which allowed her to be one of a team of professionals in a small hospital. This position was only available one day per week and required a 230-kilometre round trip. However, it met her need for same-profession contact.

I was hungry to work with other [professionals from my profession]. That is why I took on the rural hospital job to see what is going on in the rest of the world. Like, yeah, same profession, as in professional support and interaction, I guess, contact ... just to talk [shop] with someone else, because you can't talk [shop] with a nurse. Fiona5.508

Unfortunately, Professional Isolation still occurred for remote professionals who had same-profession colleagues. Both scarcity of resources compared to community need and the geographical distances of communities prevented travelling with a professional peer.

We only have two [my profession] in this team and the only time we ever go out together is when we take someone out on an orientation trip, which is sad because I would like to spend some more time sometimes with just another [in my profession]. Faye4.181

Lack of same-profession access was challenging. However, the context of delivering patient care and service delivery in very remote areas further added to the isolation. For example, Leila rated her *NoviceRemote* as most isolated from same-profession support. As a remote novice herself with only brief hospital experience, Leila explained that she needed more than same-profession support. She wanted to debrief with and seek advice from someone who really understood her work context, but she stated that there were very few professionals who could do this.

I would much rather have people to talk to. It does feel isolating. Like, I know there are people out there but there are not many people. I can't just pick up the phone and ring a hospital because they don't really know the environment you are in and the social factors you have to consider. Leila6.458

For some participants the team was very functional and provided rewarding personal connections as well as work context support which helped offset the absence of a same-profession colleague.

We are in a team where we are really quite strong individual women, but we respect each other's professions and boundaries. We are tied, not only by the fact that we are strong and that we are all allied health professionals; but we are also tied by the fact that we are all about the same age and all of us have kids and we all have issues with our children. It is a very supportive team and you build relationships because you are going out bush with them. Faye4.107

In summary, the construing of participants about the Professional Isolation experienced in work places indicated that it continues to be a real issue for remote professionals. Potentially, it is person- and context-dependent, with novices at most risk of being seriously impacted. Local workplace policy could make a difference.

6.3.4 Professional Development

Professional Development (PD) is a professional responsibility and refers to ongoing training undertaken to enhance one's knowledge and standing in their profession. In Australia, it is generally mandated in order to maintain professional currency and registration (Australian Health Practitioner Regulation Agency, 2014; Humphreys et al., 2007). The literature cites access to PD as challenging for AH professionals in remote areas (Humphreys et al., 2007).

Constructs coded to PD include reference to access, workplace, and motivation factors that enhance or inhibit PD opportunities. Table 6-5 shows that remote professionals appeared to accept that their *Ideal* position would have some remote location-associated constraints. By comparison, the *Ideal* ratings for participants in urban areas demonstrated their construing that PD access was not an issue.

Table 6-5: Constructs, ratings and exemplar constructs coded to Professional Development

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Bianca9, Dimity4, Deanna8, Fiona4, Kylie3, Lena8	PD supported by workplace but recognition that constraints may exist (limited face-to-face access, expense and travel), and learning from colleagues and self-study	Access to PD impacted by travel, finance and requirement for generalist clinical role	As for <i>SuccessfulRemote</i>	Accessible face-to-face and less impacted by finance, driven by clinical specialisation role
Did/Won't: Nina6				
Not/Won't: Laura3, Teagan7				

Bipolar construct examples

Expensive and difficult to access face-to-face professional development ↔ Able to easily access professional development face-to-face. Lena8

Access to PD restricted by travel and accommodation expenses rather than by topic ↔ Access to PD restricted by relevance to current role and management policies. Nina6

Career development and professional development are available and accessible ↔ Professional isolation and career development are difficult to cope with. Bianca9

Financial factors affected access to face-to-face PD (Lena8, Teagan7, Nina6, Laura3). These costs included registration, travel, accommodation and meal expenses. The ratings for face-to-face access were starkly different between remote and urban professionals, with urban professionals rated as less affected by costs. Lena, who worked in a very remote area, explained that face-to-face PD required travel to major centres. Fortunately, her workplace provided financial assistance.

PD opportunities or conference opportunities are difficult for us to achieve because not a lot of conferences occur in [very remote town] ... We have got an allowance for PD. So that has to include travel arrangements. So obviously travel consumes a large portion of our PD allowance. Lena8.605

The amount of time and financial support available for PD varied. Participants reported using family and friends to reduce accommodation costs, and travel expenses were not consistently covered by employers. Nina's experience was quite common:

There were rare occasions when I could take the work car. Things like travel time to and from [major city] weren't covered unless there was something like essential or very relevant to our role ... So I went to the [professional association] conference, and whilst the course itself was covered by [employer] everything else about it wasn't. So even like parking. I stayed with family but it wasn't ever offered that we could have some accommodation. Nina6.312

The availability of online training was noted as an alternative. However, face-to-face access was still preferred.

We get very good at videoconferences or webinars because that is our options. You could be there in the flesh or participating if you were closer to the metro areas. Lena8.619

Workplace factors that influenced PD revolved around policies that restricted individuals to topics of direct relevance to their work. This included refusal by management to approve PD opportunities if other professionals were already skilled or working in a defined position focussed on that clinical area.

In my current [hospital] role I would only be able to do ones that were relevant to my current role ... I wouldn't be able to do in-depth rehab stuff unless I was already in that role. Nina6.304

Some participants recognised this as standard organisational policy. However, others, like Teagan, construed it as hampering career progression opportunities.

You might feel that you want to develop your knowledge and skill base more but because you are meeting the base requirements it is not supported. Teagan7.410

Career specialisation in urban settings was seen to provide a natural focus for an individual's PD program. Accessing training events based on area of expertise was valued and facilitated

in-depth learning and consolidation of expertise. This situation is compared with remote professionals who needed to be skilled generalists, and therefore their PD required breadth.

If you are working in one area, then if you are doing PD you only need to go to PD that revolves around that area so you get to it in a lot more depth; whereas out here [remote], we can do PD on heaps of different topics ... we don't get to go in-depth. Kylie3.148

In summary, PD was seen to vary between remote and urban positions in terms of financial impost and support for attendance. It was construed as harder for *remote* AH professionals to maintain generalist clinical knowledge because of lack of access to PD for the breadth of work they managed. Maintaining professional skills *via* PD, links with the code of Expertise, which will be discussed later in this chapter (See Section 6.4.2).

6.3.5 Travel

Travelling to provide services in locations distant from the AH professional's designated office was construed as an expected part of *remote* work. This compared with *Hospital/Other* who provided services to inpatients or on-site outpatient clinics. It appeared that the professionals sometimes had to adjust to the amount of travel required in remote areas. For example, in Table 6-6 the *NoviceRemote* can be seen as preferring less travel.

Table 6-6: Constructs, ratings and exemplar constructs coded to Mobility/Travel

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Faye5,12, Kathleen4, Kylie6, Lena5,6, Nicole3, Not/Might: Ben4, Madeline8 Not/Won't: Shannon6	Travel preferred by majority; two urban-based prefer no travel for work	Travel accepted and preferred	Travel less preferred than <i>SuccessfulRemote</i>	Centre-based services provided so work travel not required

Bipolar construct examples

Have to cope with a lot of travelling; day trips, fly-in fly-out, which reduces patient contact time ↔ Might need to travel to work location but no need to travel for patients. Shannon6

The long drives allow you to reflect and explore all options and to debrief ↔ Being so busy you don't have time to think holistically. Faye5

Tolerant of being a 'pack horse' which also requires being organised ↔ Centre-based service delivery where everything is comfortable and provided for the professional. Madeline8

Three ideas were associated with work travel. These included coping with the travel, recognising the benefits of travel time for reflection, and being skilful at managing travel.

Coping with the travel meant accepting it as part of the job in remote areas. This included acceptance of the separation implied by overnight travel from family and social activities,

including potential restriction on the AH professional's ability to contribute to outside-hours events such as committees or sport (Kathleen4). Coping with travel also included a willingness to factor in time for travel. This included both the AH professional and their organisation recognising that travel time was part of the work day and by implication potentially reduced the number of patients seen.

Travel is an expected part of this job whereas I guess in the hospital it is not. And travel in the city is related to efficiency – if you have to travel half an hour to see a patient that is half an hour less you have to see a patient. Whereas here, if we travel for three hours each way and only see three patients that is OK – it is not so much about efficiencies and numbers because towns need service anyway. Kylie6.406

Kylie's attitude was very different from that of Shannon, an urban novice who construed travel time as an imposition that reduced the time available for doing clinical work.

I just think that personally that [travelling for work] would be quite draining – you spend half your day driving and then the real part that you enjoy, educating the patients or talking with the community people, is cut short. Shannon6.730

In contrast, Faye, a remote AH professional, construed the travel time as providing the benefit of quarantined time for thinking. This appeared very helpful in managing her work and the emotional realities of what she is confronted with in her work. She believed that AH professionals who don't travel miss out on valuable reflection.

My job gives you time for reflection because of the long drive in and out. And it gives you a chance to really evaluate your time and explore all options, and to debrief because some of the stuff that happens out there is not good. Faye5.363

Being skilful at planning for travel included learning efficiencies in trip preparation. This included pre-planning trip requirements while being flexible and adaptable with the materials taken. This was in contrast to centre-based AH professionals who were construed as having comfortable offices with resources constantly at the ready. Experience appeared influential, as *NoviceRemote* was rated as less efficient and skilful in managing travel.

Participants recognised that urban-based AH professionals may also be itinerant. For example, Madeline, a novice urban AH professional providing home and school visits to clients, also commented on the complexities of managing this type of travel.

It becomes quite hard because you have things stored in all different places when you need it, and it's quite hard to make sure you take everything with you. It's like packing a little suitcase every time you go to see a client. Madeline8.679

In summary, travel was construed as impacting AH professionals in both remote and urban areas. However, the *Hospital/Other* position was centre-based with no travel requirements. The AH professionals in *remote* areas had the additional impost of overnight travel, which impacted

their personal lives. While travel was seen to reduce patient contact time, this was offset for some participants by the space it provided for reflection and planning. Experience played a role in efficiency of travel.

6.3.6 Service Orientation

The code of Service Orientation was assigned to constructs where participants described the emphasis and focus of the employing organisation as it impacted their work. Constructs included the role of evidence-based practice and experience in the day-to-day work of the AH professional, the developmental stage of the organisation, and the accountability of the organisation and the AH professional to their community. Table 6-7 summarises the data for the code and shows the professional tension between evidence-based practice and experience.

Table 6-7: Constructs, ratings and exemplar constructs coded to Service Orientation

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Faye1, Ingrid8, Kathleen6, Tania2 Not/Might: Danielle9, Karla1 Not/Won't: Shannon4	Evidence-based clinical practice that acknowledges clinician experience and responds to service users, whether a new service or established	As for <i>Ideal</i>	Lacking in experience but otherwise similar to <i>Ideal</i>	Emphasis on evidence-based practice with less regard to clinician experience, less responsive to service users, although service is well-established and utilises protocols
Bipolar construct examples				
<i>Environment facilitates evidence-based practice plus experience-based practice ↔ Environment facilitates evidence-based practice. Danielle9</i>				
<i>Patient services need to be set up ↔ Patient management is based on protocols. Shannon4</i>				
<i>Expectations of community, manager, funder all need to be considered by the professional because the service is constantly evolving, community needs can be taken into account and services can be responsive to needs as they arise; community people want to know about the service and why ↔ Service delivery is well-established and professional only has to account to the manager and has a referral network they can access. Kathleen6</i>				

There were two main differences in the ratings for this code across the elements. The most significant for individual clinicians was the role that experience and evidence-based practice played in the delivery of services. The *HospitalOther* was seen to work in an environment where evidence-based practice was more important than professional experience. In *remote* work the AH professional was seen to make judgements that accounted for best practice and their clinical experience. Examples of this emphasis in remote areas was also found internationally (Pidgeon, 2015). Danielle illustrated this with an example of an evidence-based treatment protocol that cannot be delivered in remote areas unless modified.

A clinician in an urban hospital position can implement it [evidence-based technique] twice a day, just as recommended best practice, but if you are in a remote community, the clinician has to adapt the technique and how it is implemented because there is just no way that it would be possible to have a therapist provide therapy to a client twice a day out there. So it is a balance around delivering services in ways that combine your experience of what works and what is possible in that context with the evidence. Danielle9.124

The second difference was in the developmental stage of the organisation and the impact this was construed to have on its ability to be responsive to service users. Participants gave examples of setting up remote services and compared these with well-established urban hospital services. Sometimes, being responsive created a conflict for the AH professional between what the organisation required, compared with what they understood the community to want.

In a remote community I may be one of the only people offering a specific [profession's] service. So there may not be someone that I can refer to if the client is talking about [a specific condition], or [needing] a specialist in [specific condition] ... All those needs are not being met but there are expectations – expectations of a community, of your own, of your management as well as an expectation of a funding body. In a hospital job where your job is very clear and your KPIs [sic] are again very clear and your boundaries are specific, you don't always have to consider all of these things, the community expectations and even how the service should look. Kathleen6.471

This extended to how health services needed to be accountable to both their communities and their funders. The most common requirement for accountability to health service funders was quantitative data. Kathleen, a remote AH professional with wide experience across a number of states, explained the difficulty in using quantitative information to demonstrate outcomes:

One of the struggles that we have at the moment is that there is a funding body wanting quantitative data and our quantitative data isn't great but we don't have a really good way of measuring all our qualitative stuff. They place a very high priority on numbers whereas in a remote location, numbers don't even tell you probably twenty percent of what is going on. Whereas if you come and talk to us you will get a much better understanding. Kathleen6.506

Another example was provided by Tania, a remote area professional with a very specific role which precluded her from addressing other unmet but related community needs. This resulted in ethical conflict for her. She desired to extend her professional services, but policy and funding conditions wouldn't allow it.

I see this as a duty of care issue and I see that it is the community ... not getting a service that they should have delivered to them. Tania2.121

In summary, the orientation of the service was seen to differ across *remote* and *hospital* settings with the *hospital* construed as established in service delivery, having expectations of protocol use and with less ability to adapt to community needs. In contrast, *remote* AH

professionals needed to utilise their experience combined with best evidence while demonstrating the worth of their service in ways that were seen as credible by both the community and the funder.

6.3.7 Workplace stability

Constructs were coded to Workplace Stability when participants addressed retention or turnover of AH professional staff. Three constructs fitted this code; all came from novices.

Table 6-8 summarises this code and shows that the *HospitalOther* was construed as stable compared with *remote* work, although permanency or longer contracts were preferred for the *Ideal*.

Table 6-8: Constructs, ratings and exemplar constructs coded to Workplace Stability

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Bianca10 Not/Might: Karla5 Not/Won't: Teagan1	Staff are retained and longer contracts or permanency are offered	Unstable employment	As for <i>SuccessfulRemote</i>	More stable than remote but staff turnover still problematic
<i>Bipolar construct examples</i>				
<i>High turnover of staff; short contracts, broken contracts; results in stress from increased workload, and patient care is compromised ↔ Staff loyalty to department because of permanent positions and renewal of contracts; staff morale is strong, and patient care is more continuous. Karla5</i>				
<i>Stability of employment ↔ Employment vulnerable to redundancy because of funding – project funding. Teagan1</i>				

Despite the small number of constructs actually developed, additional evidence for the code was provided by other participants (e.g. Kerrie324, Chloe732) who mentioned personal experience with short-term contracts and workplace staff turnover.

*There's always new staff everywhere you go. So then you're starting again.
Chloe732*

Reasons for staff turnover were short-term contracts or termination of funding at project completion. Major hospitals also often offered short-term contracts. One popular form of short-term contract, the new graduate position, consisted of rotations through various areas of the hospital, for example, rehabilitation, short stay, intensive care, medical wards and so on. People in these positions usually hoped to be retained after their contracts expired. Retention was seen to positively affect staff morale and loyalty as Karla, an urban novice, emphasised:

*Their manager really, yeah, fights for permanent positions and to have their contracts renewed so ... they've got a lower turnover – like, people will still stay on the contracts because most of the time it gets renewed and there's a permanent position in the future and they have that loyalty to the department.
Karla5.586*

The vulnerability felt by novices about their short employment contracts and project positions reinforced their 'generational' lack of loyalty to the employer and sense of entitlement to move on (Twenge & Campbell, 2008). This combination of retention issues was not specifically remoteness-related.

Turnover of managers also created difficulties. Bianca, a remote area participant, described the confusion and difficulties faced by staff experiencing frequent changes in management.

One manager is in the position and you are told you need to follow this procedure when you want to drive in a remote community and you do that. And then the next manager comes and, 'No, that's not how you do it. You need to do it this way'. So it's ... like a yo-yo ... moving back and forth. Bianca10.388

In summary, the code of Workplace Stability revealed that the high staff turnover in contemporary workplaces has a negative effect on staff loyalty and morale. While problematic for new graduates in urban areas, it was construed as more detrimental for AH professionals working in less supported *remote* roles.

6.4 Construing about work when the attributes of the work environment and personal attributes of the professional overlap

The purpose of this section is to detail the codes where the constructs assigned to them were associated with either workplace or personal attributes. For example, in the constructs coded to 'Flexible', was '*willingness to work beyond job description*' (Kirsty3). This described a personal attribute about an AH professional. Another construct also coded to 'Flexible' was '*large waiting lists mean they can't be flexible*' (Teagan2) which referred to a workplace attribute of lengthy waiting lists. Thus, the codes in this section contain constructs expressed as either workplace or personal attributes. This means that potentially both the workplace and the AH professional can influence the attribute and therefore its implications for the recruitment and retention of AH professionals. **As listed in the middle column of Table 6-1 shown earlier, there were seven codes in this section.** Each code will be addressed individually.

6.4.1 Patient Relationships

Forty constructs were coded to Patient Relationships. This code described factors that affected the AH professional's approach to the patient. The relationship between the AH professional and the patient was construed as important because it influenced patient health outcomes. As a large code, it is best understood by further classification into four subcodes which will be considered separately.

6.4.1.1 Patient-centred or Results-centred

The subcode, Patient-centred or Results-centred, describes the value with which the AH professional or the work environment holds the patient relationship (Australian Commission on Safety and Quality in Health Care, 2011; Stewart, 2001). The two poles of the code were distinguished by what was construed as important. One pole placed importance on the patient as a person; the other pole placed importance on performance indicators or was self-focussed. Erin explained this:

Some of us are just there for our patients and very patient-focussed the entire time without too much thought about your own need; and then you have the other extreme where people are really focussed on how stressed they are and what they need to achieve rather than on the patient journey. Erin4.254

Table 6-9 summarises the evidence for this code, where participants more commonly described it as a personal leaning (19 personal constructs) but that it could also be shaped by workplace demands (four workplace constructs). As can be seen, the *Ideal* was construed as very strongly patient-centred. The differences between *SuccessfulRemote* and *NoviceRemote* are further evidence for the role of the workplace in shaping the patient relationship. The *NoviceRemote* was seen as self-focussed, while experience has potentially allowed the *SuccessfulRemote* to focus on the patient rather than needing to hone clinical skills.

Table 6-9: Constructs, ratings and exemplar constructs coded to Patient-centred or Results-centred

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
<p>Personal:</p> <p>Am/Suits: Bianca1, Chloe6, Dimity5, Deanna4, Erin4,7,8, Faye6, Ingrid1, Leila3, Nicole1, Philippa3, Rhys2, Steve1,5, Trish10</p> <p>Did/Won't: Nina1</p> <p>Not/Might: Ben2,5, Madeline4</p> <p>Workplace:</p> <p>Am/Suits: Lena10, Faye2</p> <p>Not/Might: Ben1</p> <p>Did/Won't: Nina1</p>	Very strongly patient-centred	Strongly patient-centred	Moderately patient-centred (but also self-centred)	More results-centred than patient-centred.

Bipolar construct examples

Developing relationships with families/clients where I can understand their needs and priorities rather than focussing on my expert opinion ↔ Bustling in and talking about what you know and what the family needs to do and not considering what the family needs and what their capacity is to do what you are suggesting (You are the expert, the family is passive). Deanna4

Patient-centredness was described as taking a holistic approach. This meant the AH professional accounted for the patient's social and functional issues, not just the medical condition (Bianca1, Ben1, Faye2, Nina1). In particular, participants noted that *remote* AH professionals found their work environment facilitated this.

One of the things that I love about going out bush is that I can actually look at the person holistically and try to get them to achieve things in their own home doing things that they need to do functionally. ... It is all very well to walk someone down a clinic corridor but that is not the same as walking around their backyard with the dogs and everything else. Faye2.55

Remote AH professionals were able to work more collaboratively and empower people because of observations and insights gained through familiarity with the patient's environment (Ben5, Erin7, Faye6, Ingrid2, Lena10, Rhys2 Steve1, Madeline4). This included the tailoring of services to meet patients' needs, as well as facilitating the development of trust and patient self-management (Lena10).

You want that drive and ownership to come from the service users themselves, rather than being clinically driven from us. Ingrid1.60

One participant acknowledged that therapeutic relationships that rely on collaborative work with patients can feel disorganised and unsettling.

I have an idea of where I want to go but I don't want to push people ... without them feeling that they have some ownership ... An allied health practitioner will work in one way [pre-determined plan] or the other [collaborative plan] and most will be very afraid of working in that way [collaboratively]. Steve1.193

Having a relationship provided opportunities to hear patients' stories. Sometimes the results were surprising as patients revealed previously untold stories and priorities. Knowing this information allowed the AH professional to align service provision with needs.

If you don't have a level of relationship with the family and take your time to talk to them, you might not know their priorities and what is important to them. So I could give all these ideas ... and they are going to disregard them because what they think is completely different. Deanna4.142

Several examples were given where the professional expected to talk about the patients' needs from an expert perspective but in the process uncovered other priorities (Trish10, Deanna4, Leila3). In some instances the AH professional then had to accept the patient's choice to refuse services. Leila's story illustrates this.

[This lady] ended up telling me how her partner was using marijuana and that was causing them to argue and him to hit her. So once she told me that, I was sympathetic towards her and I suggested other ways we can go. 'Obviously, your health isn't the big issue right now. Maybe we can get you some other help ... so you can focus on dealing with that first; and then we can talk about your health issues some other time ...' And it also helped me understand because she hadn't made any changes. Leila3.212

Relationships also helped the AH professional focus on the concepts behind the illness (Dimity5) rather than personal expert opinions (Deanna4, Nicole1, Philippa3, Steve5) or preconceived notions of treatment based on protocol and bureaucracy (Ben2, Erin8, Deanna4).

If you have a good relationship with your patients you can often be a lot more effective. The opposite of that is a relationship that is driven by, I suppose, I don't quite know how to say it, 'I must do this with this person ... because this man is Knee-pain-man, Day 3 Post-operation. So he must do Day 3 exercise'. You know what I mean? That is a position where you don't understand your patient; you treat the condition not the patient. Rhys2.75

Finally, patient relationships were viewed as critical to achieving change (Chloe6, Ben2, Leila3). Participants used strategies such as establishing common interests (Leila3), investing in long-term relationships (Ben1) and displaying qualities such as empathy (Ben5, Rhys2).

In summary, a patient-centred approach was seen to benefit patients, and the *remote* professionals were construed as more strongly patient-centred than *Hospital/Other*. The continuity of care provided in *remote* work was a key factor, as Ben pointed out.

[In my hospital job] I might just see them while they are an inpatient in my particular ward in the hospital and then it is passed onto somebody else once they are outside of my little area. Whereas in the other [previous remote job], I managed that patient regardless of where they went. And yeah, I had to take into account all of their conditions and it was up to me to address all of their conditions. Ben1.72

6.4.1.2 Time Investment in Relationships

Thirteen constructs were coded to time as a key influence on patient relationships. These included both personal and workplace attributes. As a dispositional or personal influence, AH professionals were construed as either feeling pressured to work quickly with patients without the luxury of really getting to know patients, or being able to take time to develop personal trusting relationships. The policies and system pressures for efficient service delivery also influenced how AH professionals used their time.

[In remote] it was rewarding to be able to have the time to spend getting to know patients and having that connection with them and making a difference. Whereas with my [urban] role currently I don't have as much time to get to know patients and I am always referring to somebody else. Nina1.46

As seen in Table 6-10, in the *Ideal*, the AH professional had choices about using time to invest in relationships to bring about a better patient outcome.

Table 6-10: Constructs, ratings and exemplar constructs coded to Time Investment in Relationships

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Workplace: Am/Suits: Kylie1,8, Leila4 Not/Might: Karla6, Louise5, Madeline5, Did/Won't: Nina2	Length and number of consultations decided by professional not imposed by system	Able to use professional judgement re time with patient	As for <i>SuccessfulRemote</i>	System pressure to discharge quickly and see a large number of patients
Personal: Am/Suits: Chloe2, Dimity5, Faye9, Kirsty5, Kathleen9 Not/Might: Natalie6	Time required to facilitate trusting relationships	Required more time than <i>Ideal</i> to develop trusting relationships	Perceived time pressure reduces patient relationship focus	Strong time pressure
<i>Bipolar construct examples</i>				
<i>Client-centred looking for best discharge not just getting them out; doctors were supportive ↔ Time pressure is there; need to be efficient and doctors were keen for discharge due to bed pressure. Kylie1</i>				
<i>Takes time to develop trust and relationships ↔ Trusting relationships take less time to develop. Kathleen9</i>				
<i>Relationships help my clients achieve mutual goals (allowed time, importance of relationship is stressed) ↔ Insufficient time to develop relationships. Faye9</i>				

Remote elements were construed differently from *HospitalOther* in regard to time and relationships. The *HospitalOther* was construed as having time-limited relationships with large numbers of patients and pressure to discharge quickly (Nina2, Leila4, Kylie8, Kylie1), compared with *SuccessfulRemote* and *NoviceRemote* where patients took longer to trust the professional.

Working in the hospital you felt like you only had 5 minutes on each client; the doctor is on your case to get them out. Kylie1.59

In remote areas, longevity of the AH professional in the community was viewed as facilitating their relationships and therefore professional effectiveness (Kathleen9, Madeline5, Dimity5, Natalie6, Kirsty5). Turnover of staff notwithstanding, participants generally construed the *remote* elements as more likely to provide continuity of care to patients. This was seen as both helpful and necessary to build trust and fully understand the patient's circumstances, in order to provide high-quality care. A number of participants spoke about this.

I think that people working in the community and in remote areas would have on-going relationships with clients and longer-term interventions and more of an opportunity to build trust with clients and to see more change. Natalie6.395

You need to give more time for people to trust you and for a service to develop. You need to say what you are going to do and do it. You need to be consistent. If

you say you are going to be there every 2 or 3 weeks you need to make sure that is true. Kathleen9.685

In summary, the code of Time was construed to favour the *remote* elements rather than *Hospital/Other* who were under time pressure to discharge.

6.4.1.3 Strength of Relationships

This sub-code contained constructs that directly referred to a sense of either connection or distance between the AH professional and the patient or patient’s community. The subcode does not refer to professional boundaries or dual roles but rather rapport, empathy and ability to view each patient as an individual. Table 6-11 shows that the biggest difference between elements is how the *Hospital/Other* was construed.

Table 6-11: Constructs, ratings and exemplar constructs coded to Strength of Relationships

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	Hospital/Other construed as:
Workplace: Am/Suits: Kylie7 Personal: Am/Suits: Bianca5, Danielle8, Fiona2, Ingrid2	Strong caring relationships with appreciative patients	As for <i>Ideal</i>	Caring relationships	Relationships harder to achieve because patients are sicker, or have a sense of entitlement; and relationships briefer with professional constraints
Bipolar construct examples				
<i>Patients are appreciative of service and are willing to help themselves ↔ Patients act like the world owes them and they need 'it' yesterday. Kylie7</i>				
<i>View each person as an individual and build a separate relationship with each person ↔ Formulaic building of relationships, which is black and white. Ingrid2</i>				

For the *Hospital/Other* there was a professional sense of having tasks to do rather than getting to know the patient as a person. Bianca described it as:

'I'm here to do my job' ... You are less open to experiencing how the patient feels. Bianca5.16

One construct included the patient’s contribution to the relationship being either a sense of entitlement or of appreciation for services. The *Hospital/Other* was construed as more likely to encounter patients with high expectations of services. In comparison, the patients encountered by the *remote* elements were construed as more likely to be active in self-care and value the services available.

In summary, this subcode provided additional insight into the relationships experienced by the *remote* elements and the *Hospital/Other* element. The relationships preferred and encountered

in remote areas appeared to be stronger and more caring, with hints that patients are more appreciative of services.

6.4.1.4 Communication Contributes to Relationships

Three constructs described the importance of communication in establishing productive patient relationships. As shown in Table 6-12, communication was construed as a tool either to build relationships or to achieve a treatment goal.

Table 6-12: Constructs, ratings and exemplar constructs coded to Communication Contributes to Relationships

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Personal: Am/Suits: Erin2, Imogen5, Trish2	Clear communication builds strong relationships	As for <i>Ideal</i>	Less able to adapt communication to suit patient	Communication used to achieve a treatment goal more than contribute to a relationship
<i>Bipolar construct examples</i>				
<i>Communication serves to build the relationship and rapport ↔ Communication gets the task done. Erin2</i>				
<i>Communication includes accounting for lack of medical terminology, English, understanding of condition, disabilities such as deafness ↔ Communication limited to providing a label and using abstract terminology. Trish2</i>				

Given the evidence previously presented about the focus of the *SuccessfulRemote* on relationships, it is not surprising that both *Ideal* and *SuccessfulRemote* were rated as using clear communication that contributes to relationship building. Erin clearly construed differences between communication required to get a task done and communication to build a relationship. She explained:

The difference is that some of us probably focus more on relationship and rapport building in our communication whereas the other guys are about getting the task done when they communicate. Obviously, everybody is still respectful of their patients and everything. The radiographer needs no relationship, needs no rapport with their patient. They just need them to sit still. And the likelihood is that you won't see them again. I mean, they do need a bit of a relationship, they obviously don't want to tick them off in the two minutes they are there but if they do tick them off it, if they are only going to do a quick chest x-ray that won't be a big drama. Erin 2.191

The *HospitalOther*'s lower rating on communication could be explained in that their relationship with the patient is usually shorter and supported by a degree of implicit trust in the system. Thus, the *HospitalOther* may not have to prioritise communication that supports a long-term relationship. As in a number of other codes, the *NoviceRemote*'s inexperience likely contributed to their lower rating.

In summary, the participants construed the *Ideal* as using clear communication skills to build strong relationships. The *SuccessfulRemote* element mirrored this. The *HospitalOther* was construed as more likely to use communication to achieve treatment goals rather than build relationships.

6.4.2 Expertise

Twenty-nine constructs were coded to Expertise. This code referred to the kind of professional expertise that was valued or needed in the workplace. It was described in two ways: in-depth and specialised expertise; or a broad skill set to manage a large range of clients. It included both knowledge and skills. The majority (22) of constructs were coded as workplace attributes (i.e. participants construed that particular expertise is implicitly required by workplaces).

Table 6-13 summarises the data coded to Expertise. As can be seen, the *remote* elements were construed differently from the *HospitalOther* who was rated as having specialist expertise. As would be expected in a sample of AH professionals from a range of positions including both specialised and generalist, the *Ideal* reflected personal preference and appeared associated with the current work location of the participant.

Table 6-13: Constructs, ratings and exemplar constructs coded to Expertise

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Workplace: Am/Suits: Chloe10, Deanna8, Faye8, Ingrid6, Kylie3,6, Kerrie2, Leila5, Lena4, Nicole5, Tania3 Did/Won't: Nina4 Not/Might: Ben4, Karla7, Louise3,7, Madeline7,9, Not/Won't: Laura1,4, Olivia6, Teagan9	Generalist knowledge preferred by remote; Specialist knowledge preferred by urban	Generalist skill set required because of wide variety of presentations and lack of other services	As for <i>SuccessfulRemote</i>	Requiring more specialised skill set
Personal: Am/Suits: Bianca13, Kylie5, Rhys12, Ursula7 Not/Might: Karla4, Natalie4 Not/Won't: Teagan4	Holding specialist knowledge that supports desired career path	Holding generalist knowledge	Trend toward generalist not specialist knowledge	Mostly holding specialist knowledge

Bipolar construct examples

We do everything but don't specialise in anything; you have to know a little about everything. (Jack of all trades/master of none) ↔ Opportunity to specialise in an area, developing expertise and knowledge in that area and can focus your PD in that area to a lot of depth. Kylie3

Specialist-generalist, variety of clients with a wide age range and variety of conditions; so need to know a little bit about everything, confer with others and look things up, stay updated in all areas ↔ Complex clients who require multi-disciplinary team management so AHP can become more narrow and specialised. Kerrie2

Less variety in work; seeing a similar client group and doing a similar type of assessment and intervention a lot ↔ Have a lot of depth of knowledge in a narrow area. Laura1

The two poles of the constructs demonstrate the dichotomy that expertise can be broad and inclusive of all patient types, or be specialised, in-depth and highly focussed (Ben4, Deanna8, Ingrid6, Karla7, Kerrie2, Louise3, Leila5, Laura1, Lena4, Madeline7, Olivia6, Rhys12, Teagan4, Ursula7). Many *remote* participants construed themselves as generalists, i.e. they 'did everything'. In comparison, the ratings confirmed the *Hospital/Other* as more specialised or not required to have the same level of generalist skills as *SuccessfulRemote*.

Remote participants were consistent in their descriptions that their positions demanded skills to manage a wide range of presentations. Kylie described her experience:

We get some pretty random things crop up and ... we cover extremes of the caseload out here. So sometimes you do have to make do or ring someone who is an expert in the area to find out what we need or what the best treatment strategy is. Kylie3.87

Typically the *remote* positions also managed clients across the age spectrum and in a variety of settings including child care and schools, as well as aged care facilities (Ben4, Kerrie2, Louise3, Laura1, Nina4). This often occurred because there were no other services or professionals in the region (Kylie6, Lena4). This variety appealed to some participants, although they recognised that not all AH professionals would enjoy it.

One of the other things that some people would balk at but I don't, is that the job is very variable. We go from the cradle to the grave. Faye8.295

Several *remote* participants argued that managing the diversity of work required specialty skills (Bianca13, Chloe10, Deanna8, Kerrie2) and opportunities for skill development (Nicole5). They called for recognition of this as rural generalist-specialists.

I want to be recognised for that specialist clinical diversity. So I want there to be some kind of recognition through the [professional association], through health organisations, to appreciate that rural staff are rural generalist specialists ... As much as rural clinicians do like the variety and that they are not specialised, doesn't mean they don't want to be acknowledged for it. Bianca13.461

In comparison, others worried that the diverse work resulted in dilution of their clinical expertise or a loss of specific skills (Ingrid6, Kylie3). For example, Ingrid construed a specialist as someone whose caseload was defined by specific presentations or conditions, allowing the AH professional to develop expertise in that niche area. This contrasted with her own *remote* career where she felt her development of expertise was restricted.

Some of my frustration in these jobs is that I feel I haven't developed skills ... because of all the different jobs I have done and because of the generic nature of the job I am doing at the moment. You really don't hone up your skills to a really highly skilled level. Ingrid6.251

In a similar vein, Kylie reported personal tension between working as a generalist and having professional confidence that one's service provision for such a wide range of clients was on par with what was available from a more specialised service. She construed this as simultaneously advantageous and troublesome.

There is also one thing I don't like, that you don't get to feel confident. You do get to know lots of stuff and practise lots of things and find out new information and give it a go ... We don't have people who are specialist in different areas whereas if I was working in the city I wouldn't give something like [treatment] a go. I would pass it on to the person who knew, who was actually the specialist. Whereas here, they are like twelve thousand kilometres away. So you are like, 'Well, I will give it a go. Why not?' Kylie5.221

A number of participants construed that niche specialisation would be monotonous compared with the stimulating challenges of working across diverse settings and clients (Bianca13, Faye8, Kylie5, Madeline9, Nina4, Nicole5, Teagan9, Tania3). Variety and challenge were seen to prevent boredom and provide job satisfaction. Teagan described this:

Every day you are thrown a different curve ball. Teagan9.498

Expertise was also construed by remote professionals as being broader than just knowledge and skills to manage conditions. As suggested in the earlier discussion on Patient Relationships, understanding the context and needs of the patient also constituted expertise. Potentially, then, the value of consulting with AH specialists in urban areas regarding specific patients would be limited by the (lack of) expertise of the urban-based professional about the remote setting. The remote AH professional must filter the advice through their own expertise regarding the patient's circumstances. As Leila explained:

You know, I can ring up someone say at [hospital] and they might give you a brilliant explanation of 'This is what you can do' but it is probably going to fail because they are not considering who these people are that we are dealing with and what living conditions are out there and what the patient can access. Leila5.486

Several constructs addressed the role expertise can play in conferring status. In particular, status was associated with specialised knowledge and skills rather than broader general AH roles. Examples included the Intensive Care Unit (Louise7) and workplaces that required medical knowledge in addition to profession-specific expertise (Laura4). *Hospital/Other* was rated higher status than *remote* and more likely to hold this additional specialist knowledge. The AH professionals occupying positions construed as higher status were more likely to be admired.

I think because ICU that is very higher-up status just because it is a lot more specialised and held in high regard ... [Interviewer: Higher regard by whom?] By peers, like [profession] colleagues, and probably like other professions. When you say you are working in ICU they say, 'Oh, wow.' Especially medical doctors hold you in high regard. Louise7.525

Specialising was construed as providing a focus for professional development (Deanna8) and defining a career path (Natalie4). Contrasting with this, generalism was construed as requiring development of transferable skills and knowledge (Natalie4).

In summary, the code of Expertise focussed on the dichotomy of specialist or generalist knowledge. Most *remote* professionals were construed as requiring generalist skills, and some believed that the diversity created positive challenges that contributed to job satisfaction. *Remote* AH professionals presented an argument for recognition as generalist-specialists.

6.4.3 Support and Supervision

Purposeful development of capability in that person, a certain monitoring of how they are going and helping them to help themselves ... having wise heads around them looking after them I think is really important ... Having someone around that you can turn to and say, 'This has happened. What I do?' Rhys7.284

Twenty constructs were coded to Support and Supervision. Half were expressed in terms of workplace attributes and half in terms of personal attributes. As a workplace attribute the constructs addressed the workplace availability of professional Support and Supervision, including same-profession support. As a personal attribute it referred to the expectations and needs of the AH professional in regard to Support and Supervision. This code relates to Professional Isolation discussed earlier in that adequate Support and Supervision can offset Professional Isolation. Table 6-14 summarises the constructs and ratings for Support and Supervision and shows that participants rated their *Ideal* as having support and supervision, but also relied on a self-developed support network. Several participants (Dimity, Fiona) rated their *Ideal* element as having poor support and supervision. This is likely a pragmatic outcome as the possible geographical isolation of their *Ideal* created inherent difficulties in accessing supervision.

Table 6-14: Constructs, ratings and exemplar constructs coded to Support and Supervision

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Workplace: Am/Suits: Chloe8, Dimity7, Fiona5, Leila6 Did/Won't: Nina3 Not/Might: Karla3 Not/Won't: Laura3, Olivia4, Shannon2, Teagan3	Supervision and support generally available	Supervision and support less available (rated midway)	Supervision and support least available	Supervision and support readily available
Personal: Am/Suits: Chloe7, Ingrid3, Kathleen8, Philippa9, Rhys7, Ursula7 Not/Might: Madeline2 Not/Won't: Laura2, Shannon1, Teagan4	Able to work independently and confidently with a self-developed support network	As for <i>Ideal</i>	Less able to work independently, requiring support for professional practice and role definition	As for <i>Ideal</i>
<i>Bipolar construct examples</i>				
<i>Support and supervision are readily available ↔ Support and supervision are difficult to access. Chloe8</i>				
<i>Working independently and having confidence in your decisions ↔ Needing a high level of support and supervision and reassurance that your decisions are appropriate, wanting a lot of guidance about your clinical decision-making. Laura2</i>				
<i>Ability to work independently; don't need supervision, confident in their professional capabilities, sure of themselves ↔ Anxious about professional practice and overly cautious and constantly needing reassurance. Shannon1</i>				

The workplace attributes were developed by participants from both remote and urban workplaces, and the ratings indicated participants construed differences across locations. *HospitalOther* was construed as having the most access to same-profession support and supervision that could be tailored to the needs of the professional. Descriptions such as ‘readily available’ (Chloe8, Dimity7, Karla3, Olivia4, Shannon2), ‘easy’ (Leila6, Laura3) and ‘accessible’ (Fiona5) were used. Nina, a former *NoviceRemote*, described the supervision she was experiencing in urban as ‘as much as you need’ (Nina3). This was a huge and welcomed change from her previous remote workplace. She expanded by describing the flexible but structured approach taken by her current supervisor.

Meeting up with my supervisor weekly or fortnightly, going through any issues I am having either with my clinical caseload or just generally, time management or managing my caseload or accessing more professional development, or having her shadow me, or having her observe me do assessments or treatment session, or discussing treatment plans with her. Nina3.161

Potentially, the large size of the same-profession team in Nina's urban workplace provided flexibility regarding same-profession supervision. This contrasted with her remote workplace where, despite her novice status, she had been the most senior in her profession and same-profession supervision was not available.

Nina's positive urban supervision experiences were not universal, however. Shannon, an urban novice, described how her supervisor was often busy and unavailable.

If I needed an answer right then and there, then I couldn't – I just had to think on my feet and go with what I thought was best. Shannon2.433

However, earlier in the interview she had explained that she had many sources of supervision, including an external mentor. This potentially had a protective effect; a safety net that she knew was accessible if required.

I don't have anyone who is watching over me making sure I do the right thing but there are people around me in my work that I can go to for help but I have to actively seek that. Shannon2.260

While both *SuccessfulRemote* and *NoviceRemote* were construed as working in locations with limited support and supervision, alarmingly, some participants construed the *novice* as having the least supervision (Chloe, Fiona, Leila, Nina). For example, Fiona believed that her *NoviceRemote* was likely to be impacted by lack of supervision made all the more noticeable because of the close supervision and support enjoyed as a student.

He would be ... used to having like a whole university full of other [same-profession] students around so he would have still felt isolated out in the rural areas. Fiona5.550

Shannon, an urban novice, elaborated on urban-remote differences when she talked about how she construed the circumstances facing the remote professional.

I have the impression that they're [remote AH] left on their own a lot ... I think they would have to set everything up process-wise, referral-wise. Whereas for us in the urban setting, we just sort of walk over to a desk and everything is there waiting for us. If someone is admitted with [a condition], for example, we know exactly what to do because someone else has written a protocol which we follow. Whereas I think in the remote setting I have the impression that none of that information would be available and that you would need to make up those protocols yourself. Shannon4.520

Two participants, Teagan and Chloe, developed constructs that indicated that belonging to a team contributed to support and supervision for individual AH professionals.

[Without a team] you feel a lot more unsupported, a lot of difficulties in problem-solving without the opportunity to share ideas and build on things together. Teagan3.182

While constructs coded to workplace attributes suggested location was the key factor in availability of Support and Supervision, construct ratings for personal attributes suggested experience made a difference in coping when support and supervision were absent. Karla, an urban novice, explained that Support and Supervision were more critical to her confidence and management of the multiple demands of her work than the actual size of the caseload.

I would be more stressed without the support than with the magnitude of work. So I cope better if I know what I'm doing [despite] a whole heap of work – it's not as bad as if I had less work and didn't know what I was doing. Karla3.388

The ratings showed that *NoviceRemote* was construed as least able to work independently compared with the other elements, while the *Ideal*, *SuccessfulRemote* and *HospitalOther* were efficient (Ingrid3), content with limited feedback (Kathleen8), independent (Laura2, Madeline2, Rhys7, Shannon1) and confident (Madeline2, Shannon1). Confirming that experience-related differences are important, Shannon, an urban novice, explained:

I do have some confidence but not in the more complex things and I guess because I'm doing a lot of things for the first time I don't have that same level of confidence. Shannon1.238

Interestingly, although overall the *NoviceRemote* was construed as needing more Support and Supervision than the other elements, participants who were novices in remote areas did not always construe this difference. For example, Chloe rated herself as someone who valued support but her *NoviceRemote* as someone who can work independently. This may indicate individual differences in personal confidence and willingness to request support. Rhys, a mature-aged novice in a remote, area was adamant about the importance of intentionally seeking support.

You need to be able to look out for yourself and build yourself a support network for longevity in the role. You have to be able to do that ... If you have any expectation that other people are going to look out for you and then they don't, you are stuffed. It is not being realistic about the situation you are in. Rhys7.302

Philippa, a remote AH professional, construed her *NoviceRemote* as at risk of being a loner. She echoed Rhys's thoughts about the importance of proactively developing personal support networks when working in remote areas.

Support networks for work specifically ... that is a quality you need to have – to try to make networks, whether you are a new grad, or any new job, really. Philippa9.413

In summary, Support and Supervision are linked with Professional Isolation, the key difference being that provision of Support and Supervision is a strategy that reduces Professional Isolation. It can be provided by the workplace, but some AH professionals needed

to be creative in accessing sources of support and supervision. *NoviceRemote* professionals were construed as least supported and potentially less confident to seek support.

6.4.4 Flexibility

You have to be flexible ... and you have to go through plan A, B, C and D frequently and you always have to have a back-up plan, or be happy not to have a back-up plan and just see what happens. Deanna10.552

Flexibility was seen as an attribute that was either required by the workplace (7) or demonstrated by the AH professional (8). It could be thought of as being comfortable with uncertainty and able to adapt to the situation that presents. It implied behaving in a professional manner that aimed to achieve the best outcome regardless of the situation. As seen in Table 6-15, the *remote* elements required greater Flexibility, while the *HospitalOther* was construed as working within a rigid system that required a process-type approach.

Table 6-15: Constructs, ratings and exemplar constructs coded to Flexibility

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Workplace: Am/Suits: Kathleen2, Kirsty12, Kylie2, Philippa1, Ursula1 Not/Won't: Olivia3, Teagan2,	Flexibility required	High degree of flexibility required	Flexibility required	Flexibility not required and rigidity imposed by the system
Personal: Am/Suits: Dimity6, Deanna10, Erin1, Kirsty3, Nicole8, Trish5 Not/Might: Danielle6,10	Highly flexible	Highly flexible	Flexible	Organised and bound by processes

Bipolar construct examples

Flexibility to deal with everything that walks in the door; having a range of skills to deal with clients, and sustainable service development that meets community needs ↔ You have to do what the bureaucracy/policy requires. Philippa1

Adaptable and flexible in regard to who you see, where you see them, how you see them, where you live/sleep, the working environment in the community ↔ Rigid and with high expectations of your work environment and expecting it to be suitable to you. Deanna10

Adaptability ↔ Limited, structured and rigid. Danielle6

This code was expressed in behavioural terms, including adaptable (Danielle6, Deanna10, Trish5, Dimity6), willingness (Danielle10, Kirsty3, Kathleen2), flexibility (Erin1, Nicole8, Kirsty12, Philippa1, Ursula1), creativity (Olivia3) and filling the gap (Kylie2). The constructs included specific examples that explained why and how AH professionals needed to be flexible. These included treatment goals (Danielle10), caseload eligibility (Deanna10, Nicole8, Philippa1,

Trish5, Ursula1), working environment including travel demands and 'office' facilities (Deanna10, Kirsty3, Kathleen2, Trish5), schedules (Erin1, Trish5, Kathleen2, Kirsty12 Ursula1), and resourcing (Kylie2, Olivia3). Many of these are work environment factors that require the *Hospital/Other* to be process- and schedule-oriented, while the *SuccessfulRemote* and *NoviceRemote* has to manage uncertainty.

I think if you are successful in remote areas you are very adaptable ... to your situation, to the timing, to the people. If you turn up to the airport and the plane is not going for three hours you have to be able to cope with that sort of frustration in scheduling. Your schedules are never set in anything other than jelly; it is being adaptable, changing from day to day, not wanting to have an absolutely fixed timetable, thinking you are going to go somewhere one day and turn up somewhere else the following day. Trish5.169

For Erin, an experienced remote AH professional, flexibility and openness were integral to her approach. However, she had observed other AH professionals working in a more rigid way.

I always think that things change over time and you need to be flexible in that, and while these two [AH professionals] spend a lot of time mapping out the whole process, I think, 'Let's just start at step one and see where the future carries us'. Erin1.54

Learning to balance flexibility with process was an important part of becoming a successful remote AH professional. Nicole, an experienced remote AH professional, gave an example of caseload management – expertly applying or bending rules. This compared with novices who required support to develop insight about flexible application of policy.

You know the families to persist with, you know there is a particular reason behind their reticence to engage or you know the child's problem is so significant that it is worth persisting ... you ignore the policy because you feel it is in their best interest ... Sometimes, novices are softer ... and they don't use the departmental policies to guide them and you go, 'Why did you go there? They are treating you like crap. Don't give them another appointment.' I had to have that exact conversation with my last novice. N8.430

In summary, Flexibility was seen as important for *remote* AH professionals in successfully managing the many and changeable dimensions of their workplaces.

6.4.5 Colleague Relationships

The code of Colleague Relationships included constructs that referenced relationships with others in the work environment but included constructs with both workplace (4) and personal attributes (15). The constructs and ratings for Colleague Relationships are summarised in Table 6-16.

Table 6-16: Constructs, ratings and exemplar constructs coded to Colleague Relationships

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Workplace: Am/Suits: Kerrie1, Nicole9 Did/Won't: Nina5 Not/Might: Ben3	Small work environment facilitates knowing and utilising colleagues	As for <i>Ideal</i>	Similar to <i>Ideal</i>	Large size and 'busyness' of work environment changes colleague relationships
Personal: Am/Suits: Bianca11, Deanna3, Imogen7, Kirsty10,13, Steve3, Taneesha3,4,10,11, Ursula2,6 Not/Might: Danielle7,8, Madeline3	An approachable, proactive, team worker, with confidence, considerate of others, strong rapport building and conflict resolution skills, inspiring, influential and respected at all levels of organisational hierarchy	Similar to <i>Ideal</i>	Similar to <i>Ideal</i> but less skilled in conflict resolution	Similar to <i>Ideal</i> but works in professional silo and no social relationships with work colleagues

Bipolar construct examples

Get to know your colleagues and external agencies very well because the environment is small ↔ 'Busyness' of the team can make things stimulating and interesting but referrals can be shallow because relationships with referrers are less meaningful. Nina5

Work mates are your friends and colleagues ↔ Separation of work and personal life and friends. Taneesha3

Close relationships with colleagues inside and outside of work, friends ↔ Work friends are separate from your friends outside of work; impact of a work friend departing is less. Bianca11

The constructs coded to workplace attributes compared the size of the work environment and the way in which size facilitated communication and patient care, for example, prioritisation of clients. It was construed that remote workplaces were smaller, therefore facilitating better communication.

We might get extra information with a referral like, 'The parent wasn't that keen but I really encouraged them to come to see you'. So you are already forming an opinion ... [compared with] you might just get a referral on paper and you have to run with that information ... you don't have a relationship with the person who made the referral ... Communication is effortful ... probably play phone tag for a while, give up and get frustrated. Nicole9.498

[The large hospital] is just, 'Oh, I have this person to refer to you. They have got such and such' ... I guess the relationships are not so meaningful. Nina5.254

Both quotes also hint at how colleague relationships were also construed as personal attributes. In remote areas, work colleagues commonly also became friends (Madeline3, Bianca11, Taneesha3).

It is so different in rural areas than metro areas, where in rural life you have workmates as your friend, as your social circle as well. Taneesha11.195

While this filled the personal need for friendship it also brought a number of challenges. Taneesha described how her efforts to be friendly to new people were not always successful; that sometimes the other person's personality was not a good match with her own. She acknowledged that sometimes the new person did not appear interested in friendship, and this required mature acceptance. She also described a challenging situation where she had a professional difference with a colleague who was also a friend. Potentially, this could result in compromised work performance.

I was the friend with the senior [professional] but that was a little bit hard because I could not directly say if the person ... could have done more in their work or could have done things differently. I didn't feel confident coming out and saying it to her face. Also she was the authority and also my friend. Taneesha3.215

Finally, a third challenge with the intertwining of professional and personal relationships was dealing with the emotional toll when people leave the region.

[Someone leaving] also impacts you emotionally because your colleagues are often your friends here. So you develop a lot closer, you know like the girls [sic] you hang out with after work as well ... so when someone leaves it's not just a colleague leaving. It's also a friend. Bianca11.369

Explaining the impact of overlapping friendships with work roles, Nina feared she would be abandoning her friend and colleague if she moved away.

One of the things that did hold me there for a longer time was because ... the chance of them getting someone was going to be very, very minimal; and I was very good friends with the other [professional] and there was like this guilt, not just to the service but to the patients and to my own colleague knowing that it would be quite traumatic for her. Nina5.436

This professional and personal overlap appeared distinctively related to living and working in remote areas.

The constructs included reference to a number of personal behaviours that specifically described the relationship between AH professionals and their colleagues. In general, the ratings for these behaviours were positive and included professional networking to improve outcomes (Deanna3, Kirsty10, Taneesha11), being approachable for staff and peers (Danielle8, Imogen7, Madeline3), open communication style (Ursula2), assertive (Ursula6), respected (Danielle7) and fair (Steve3). Conflict resolution skills were also included and described as both constructive and tolerant, or escalating conflicts (Kirsty13, Taneesha4, Taneesha10). With the exception of the *NoviceRemote* who was rated as less skilful in conflicts, none of the ratings on the constructs coded to Colleague Relationships clearly discriminated between *remote* elements and *HospitalOther*.

In summary, **Colleague Relationships** was a code that included both workplace and personal constructs. The workplace constructs were notable in that the small size of remote workplaces was seen to encourage better professional relationships because it was easy to get to know all the relevant people. While a number of personal attributes were described, the only one that really discriminated between *Hospital/Other* and the *remote* elements was the perception that AH professionals in remote areas hold (and value) simultaneous professional and personal relationships with work colleagues.

6.4.6 Career Development

Ten participants developed 14 constructs that addressed Career Development. There were two main themes within this code: the AH professional's career motivation or drive; and the career opportunities construed as available within the workplace. Table 6-17 summarises the code and shows that participants construed the *remote* elements as having less opportunities for career development.

Table 6-17: Constructs, ratings and exemplar constructs coded to Career Development

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	Hospital/Other construed as:
Workplace: Am/Suits: Bianca9, Steve6 Not/Might: Louise6 Not/Won't: Laura6, Teagan5,7	Readily available and supported opportunities for leadership and career development	Some opportunities for leadership and career development	Limited opportunities for career development	As for <i>Ideal</i>
Personal: Am/Suits: Bianca3, Chloe12, Ingrid5, Lena2, Philippa4,8 Not/Might: Natalie4 Not/Won't: Laura7	Career development desired, although how this is achieved varies. Half prefer to prioritise family over career	Other factors prioritised over career including family, the long-term needs of the community and the demands of the job itself	Career prioritised	Career is important; however, other factors, including family, still come ahead of career development

Bipolar construct examples

Opportunities available for advancement include increased responsibility, specialisation, taking on management roles, et cetera ↔ Advancement is difficult unless you are prepared to move on. Laura6

In control of their own career direction and has a vision ↔ Career is formed by the demands of the job rather than driven by the individual. Ingrid5

Career opportunities or personal development come ahead of friends and family ↔ Putting friends and family ahead of career. Lena2

In terms of workplace attributes, the *Ideal* was construed as having Career Development opportunities readily available and supported. This situation was seen as likely for the *Hospital/Other* but less likely for *SuccessfulRemote*, particularly for *NoviceRemote*. Three out of five AH professionals who developed constructs assigned to this code were urban novices with

no experience of remote work. Examples of Career Development included provision in the workplace for opportunities for specialisation (Louise6), increased responsibility (Laura6), leadership (Teagan5) and a general recognition of worker needs for Career Development (Bianca9, Steve6, Teagan7).

In my previous job the leadership structure was very much set whereas within the hospital environment and within our department there is a lot more opportunity ... and so there is real value for taking leadership and leadership opportunities. Teagan5.300

The urban novices particularly explained and rated remote workplaces as facing limitations regarding Career Development in relation to specialisation or promotion. Laura and Teagan both commented on this.

There is a ceiling, or you have to move onto somewhere else to get those opportunities. Laura6.270

My thinking is with the ... rural and remote, is not as many opportunities to take that to the next level ... to really identify yourself as being competent or really well informed in a particular area. Teagan5.267

These findings differ from Miles et al. (2006) where novices were seen to use rural and remote workplaces to gain experiences that allow them to climb the career ladder. It appears that this sample did not construe working in remote areas from that perspective.

In relation to personal attributes related to Career Development, the constructs described the career pathway for the individual and their career motivation. The contrast poles included prioritising career ahead of other things (Bianca3, Laura7, Lena2, Chloe12), work-life balance (Laura7) and career intentions (Natalie4, Philippa4, Philippa8).

In rating their *Ideal*, participants appeared pragmatic. Out of eight constructs that addressed personal attributes and Career Development, only three rated the *Ideal* as prioritising career ahead of everything else. The other five all rated family, work-life balance, the needs of the community or the job being undertaken, as more important than career.

You are in that position because you are someone who has prioritised your career at that point in your life. So ... probably selfish in some ways, has their own needs, their personal needs at heart versus the needs of their family and loved ones. Bianca3.98

The *NoviceRemote* was rated as prioritising career more strongly than the other elements, including the *Ideal*. There was very little to distinguish the ratings between *HospitalOther* and *SuccessfulRemote*. It appeared that they had other priorities besides career intent. Ingrid, an experienced remote participant, explained:

There was a lot more vision about where this [novice] wanted to go, much clearer pathway; where both in this job and my previous job the workloads are overwhelming and it's hard to envision where I will go from either of them.
Ingrid5.210

In summary, while opportunities for Career Development were valued but construed as less available in remote areas, career drive was rated high only for the *NoviceRemote*. Other priorities overtook Career Development, including family responsibilities and ideological commitments to positions that were not considered 'career opportunities' but a service contribution. Given that this code demonstrated AH professionals as construing rural and remote work as a limited career pathway, recruitment and retention could focus on the opportunities for developing transferrable skills that would bolster Career Development.

6.4.7 Dual Roles

I find that sort of lifestyle addictive, I suppose. That it is not just professionally, but personally as well, fulfilling. Nicole6.304

Dual Roles addresses the relationship between the AH professional and the wider community, the people they interact with on a regular basis. It specifically refers to boundaries between an AH professional's personal life and professional role. The literature comments on the inevitability of AH professionals' experiencing multiple relationships in rural and remote areas (e.g. Bodor, 2008; Lonne & Cheers, 2004, whereas professional codes of conduct typically urge the use of explicit boundaries which 'minimise the risk of conflict of interest, exploitation or harm' (e.g. Australian Association of Social Workers, 2010, p. 23 Ethical Guidelines).

Five remote and one urban participant developed eight constructs coded to Dual Roles. From the ratings, and as shown in Table 6-18, either location or experience impacted on a person's level of ease with Dual Roles. The *HospitalOther* was construed as preferring and able to separate their professional and personal lives, whereas strong overlap between the two existed for *remote* AH professionals. The *NoviceRemote* appeared less at ease with the loss of anonymity construed as inevitable in remote communities.

Table 6-18: Constructs, ratings and exemplar constructs coded to Dual Roles

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Workplace: Am/Suits: Nicole4, Philippa7	Remote participants' <i>Ideal</i> personal and professional life overlap	Personal life and professional role strongly overlap	Personal life and professional role overlap	Professional role separate from personal life
Not/Won't: Teagan11	Urban participants' <i>Ideal</i> has separation between personal and professional life			

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Personal: Am/Suits: Fay 7, Fiona3, Kerrie11, Nicole6 Not/Won't: Teagan12	Experienced remote participants' <i>Ideal</i> has sense of belonging and extremely comfortable with dual roles <i>Novice urban and remote participants' Ideal</i> requires separation and anonymity	A sense of belonging; and comfortable with dual roles	Slightly less comfortable with dual roles	Not comfortable with dual roles

Bipolar construct examples

Engaging with the community (talks, client-based discussions with day care, doctor/teacher; local community knew you as a person – you were approachable and trusted as both a health professional and a community member ↔ Kept within the 4 walls and responsible to your patient and their immediate family; trusted as a health professional rather than as a person. Nicole4

Professional has multiple roles in relationships and so has to be able to deal with this ↔ Professional is anonymous. Teagan12

Sense of belonging and contributing your professional expertise in the community; connection (relationships) and status in the community (including contributing to the 'team') – anonymity and lack of belonging. Fiona3

The constructs included in this code described a number of related concepts: being recognisable or anonymous in the community (Fiona3, Kerrie11, Teagan12); having a sense of belonging and accountability to the community (Fiona3, Nicole6, Philippa7, Teagan11); and holding a reputation as a professional and/or as a person (Fiona3, Nicole4, Nicole6, Philippa7, Teagan12).

The ratings clearly indicated that *remote* AH professionals were construed as being recognisable in their community, compared with urban AH professionals. Remote participants described incidences they had experienced or observed that demonstrated their lack of anonymity. Examples included being approached in public places by patients for professional advice.

In the supermarket, they would stop her and start talking about their [condition] even though she is there with her child and she is grocery shopping. Kerrie11.853

This was quite different for Teagan, an urban novice who felt assured of anonymity in public places.

I could still go to the local Westfield and not feel that I would be easily recognised. Teagan12.615

Remote participants appeared to construe lack of anonymity as providing an advantage, as the community enjoyed claiming ownership of them.

And they tend to own you – you are the community's [profession]. 'There is my [professional]', 'Oh, we were talking about you at Probus' [laughs]- That sort of thing. You are out there. Kerrie11.857

It was seen as a two-way relationship between the professional and the community that included being accountable to, and part of, the community: '*I like being known and getting involved*' (Nicole6.305). There was a sense of belonging (Teagan11.536) and of commitment (Philippa7.343). Residing locally was construed as a contributor to Dual Roles and the sense of belonging, which contrasted with working in a city for a large organisation where community connections were lacking.

Living within the community and so feeling a sense of belonging to the people that you are working with and for. Whereas working in the city and within a big organisation like the hospital ... you place yourself wherever you think you might fit ... not feeling connected to the community. Teagan1.536

Experienced remote professionals also described how being known in the community for your reputation was important. Professional reputation and personal contributions were important in helping achieve better work outcomes. A number of remote AH participants recognised that deliberate engagement with the community improved relationships through enhancing their reputation. Philippa explained:

So they feel more comfortable because they have seen my face around, not just in a work shirt or something ... [This] makes your job easier because you do have relationships ... you can name drop, 'Oh, I saw such and such the other day'. People get to know that you do give a shit really. Philippa7.303

In comparison, the reputation and responsibilities of the *HospitalOther* were seen to end at the work door.

You were pretty much just within those four walls and you had no responsibility to the community, just had responsibility to that client that was in front of you. Nicole4.193

Even visiting AH professionals could hold Dual Roles. An example of this was the AH professional who also acted as a purchaser and courier of supplies out to the community. This offer of practical help assisted in reducing the remoteness of community life and forged relationships in the community through meeting needs.

In summary, the Dual Roles characterising remote AH professional's lives included being comfortable with being recognised, a sense of belonging and knowing that reputation was built by personal and professional actions.

6.5 Construing the personal attributes of allied health professionals

The purpose of this section is to better understand the personal attributes of the AH professional and the potential influence this has on successfully working in remote areas. **Each of the codes listed in the third column of Table 6-1 will be described in this section.** Two codes, Motivation and Approach to Culture, have a number of sub-codes under them. These sub-codes were required to better unpack the construing of the participants and to see the patterns in the ratings.

6.5.1 Motivation

Constructs coded to Motivation all described something that motivated people. These included being motivated by the needs of people, career, financial gain, challenge and learning opportunities. Each of these sub-codes will be described separately. Thirty-five constructs were coded to Motivation.

6.5.1.1 *Motivated by Needs of People*

I believe that a good [AH professional] makes a difference. And I wouldn't be doing a job where there wasn't a possibility of me making a difference. And that is why I like my profession so much because it is inherent in the role. Tania4.267

Motivated by the Needs of People was the largest motivation sub-code. This was assigned to constructs where the delivery of needed services was prioritised by the AH professional ahead of their own needs. In Herzberg's motivation theory, meeting the needs of others represents an intrinsic motivator (Herzberg et al., 1959). One pole of these constructs described concepts of improving communities, working with people who had fewer resources, and having an impact on quality of life. The influences described by the opposite pole were diverse. They included extrinsic motivators (pay, status, building the profession), workplace constraints to services, delivery of inefficient or ineffective services, or prioritising personal needs. Table 6-19 summarises the constructs in this code.

Table 6-19: Constructs, ratings and exemplar constructs coded to Motivated by Needs of People

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Dimity1, Danielle4, Kirsty4, Lena9, Philippa2,6, Rhys3, Trish8, Tania4, Taneesha7 Not/Might: Ben6, Danielle3, Natalie3 Not/Won't: Teagan10	Strongly motivated to make a difference in an area of great need	As for <i>Ideal</i>	Motivated to make a difference in an area of great need	Not motivated to work in an area of great need but still motivated to make a difference

Bipolar construct examples

Motivated by working with disadvantaged groups to try to make a difference ↔ Motivated by factors that are not related to the clients. Lena9

Motivated by client outcomes ↔ Motivated in other ways, pay, housing. Kirsty4

Clients come first even to the detriment of self ↔ Self comes first (e.g. works a 9-5 work day). Danielle4

Both *Ideal* and *SuccessfulRemote* were construed as putting the service provision needs of people and communities before themselves. Constructs included descriptions such as disadvantage (Ben6, Lena9) and self-sacrifice (Taneesha7, Danielle4), as well as motivated by prevention rather than treatment approaches (Philippa6, Dimity1). The constructs described either groups of people (Ben6, Lena9, Natalie3, Philippa2, Philippa6, Taneesha7) or individuals for whom contact with an AH professional could improve their quality of life (Danielle3, Rhys3, Teagan10, Trish8, Tania4, Kirsty4).

These [AH professionals] are really in it to make a difference whereas these are really just doing a routine. These keep the people they are servicing in mind when they make decisions whereas this one just makes a logistically-wise decision but it might not be humanitarian. Danielle3.20

Overall, the *HospitalOther* was construed as not motivated to work in a location of need, but still motivated by making an impact on individuals and their conditions. Other motivators such as pay and status did not appear to be particularly important.

The motivation [of HospitalOther] is on the individual level to help one person and their family to get better, whereas the person I am thinking about [SuccessfulRemote] their passion is about the whole community and improving the social determinants of health. Philippa6.290

There are risks to consistently prioritising others without support or self-care to offer balance. These risks include issues such as burnout or feeling overwhelmed. Danielle provided an example in her first job where her case load grew quickly and she was struggling without support to time-manage the many demands.

I started with a workload of 7 clients and within a short time it had gone to over 300. Then I went to my boss ... My boss said, 'This is the real world; you have to be happy with good enough.' But that is not me – I can never be happy with good enough. I do actually think though, that putting clients always first is a bit of a character flaw, because their friends would say that they never switch off from work. Danielle4:46

In summary, AH professionals working in remote areas were construed as being motivated to work in areas of need.

6.5.1.2 *Motivated by Finance*

Eight constructs mentioned finance as a motivating factor. However, the ratings did not show AH professionals as strongly motivated by finance or show any differences across the elements. Table 6-20 summarises the constructs coded to finance and shows the similarity across elements.

Table 6-20: Constructs, ratings and exemplar constructs coded to Motivated by Finance

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Bianca6, Fiona7, Kirsty4, Kerrie8, Lena3, Not/Might: Karla8, Madeline10 Not/Won't: Teagan10	Financial security is not the primary motivation but a reliable income is important	As for <i>Ideal</i>	As for <i>Ideal</i>	As for <i>Ideal</i>
<i>Bipolar construct examples:</i>				
<i>Motivated by financial security ↔ Have to cope with financial uncertainty. Kerrie8</i>				
<i>More concerned about money/pay ↔ Less concerned about pay but value the type of work. Madeline10</i>				

The ratings showed that while AH professionals were construed as desiring financial security, finance was not a key motivator. This fits with Herzberg's theory that extrinsic incentives could be described as hygiene factors. This means that a sufficient amount of the incentive prevents job dissatisfaction but it does not provide job satisfaction in and of itself (Herzberg et al., 1959).

Fiona's story about financial security illustrates this. As a remote AH professional, she operated a small long-term private practice as a service to her community. Patients frequently failed to attend appointments or could not afford the full fee, but her motivation was to provide a service to her community. The income was both unreliable and insufficient, and so she was forced to find alternative part-time employment.

The reason that I went back into the hospital system is to have a regular income, too, because working in private practice in a small community is not profitable ... In the hospital job at least you get paid regardless. Fiona7.651

In summary, participants did not construe clear differences between elements in regard to financial motivation but agreed that income reliability was desirable.

6.5.1.3 Motivated by Challenge

Four participants developed constructs that addressed the idea of challenge as a motivator. In these constructs, challenge was construed as stimulating and engaging, compared with boredom, stress or contentment with consistency. Table 6-21 summarises the constructs for this code and shows that challenge is construed as highly motivating in the *Ideal*.

I am comparing my current job and [others] who have that diversity and challenge, and a position that I would not like would be 'just the same ground-hog day'. Rhys11.506

Table 6-21: Constructs, ratings and exemplar constructs coded to Motivated by Challenge

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Kirsty9, Rhys11 Not/Might: Louise2 Not/Won't: Olivia1	Highly motivated by challenge	Generally motivated by challenge although one was bored	Motivated by challenge although a tendency towards being stressed	Two content, one bored and one excited by challenge
<i>Bipolar construct examples</i>				
<i>Motivated by new experiences and a challenging environment ↔ Happy where they are and doesn't like change and so wants to continue in their role (not bored, like what they are doing). Louise2</i>				
<i>Engaged by diversity and challenge of caseload ↔ Repetition and boredom. Rhys11</i>				

Challenges were construed as new experiences, diversity and implementing specific or new interventions. The diversity described included the kind of work required by remote AH professionals, such as dealing with frequently changing work environments.

I like to keep my mind active and have different experiences and not the same kind of patients day after day. And that also being in a changing environment so there is lots of different aspects like going to different towns and seeing different patients. Louise2.266

Challenge could provide positive stress when managed confidently, as well as negative stress when the work situation becomes overwhelmingly difficult. Olivia, an urban novice, described her growing confidence at work and how this growth mirrored her enjoyment of meeting the challenges.

I was initially quite challenged by the briefness of the contact. It is very demanding and it is fast. I like the busy pace of the hospital, I suppose, but I find it rewarding, too, that even in a short amount of time you can do so much.
Olivia1.154

In summary, while the small number of constructs in this subcode should be interpreted cautiously, they suggest that AH professionals in remote areas are construed as less likely to be bored at work and more likely to embrace the challenges present in their work environments.

6.5.1.4 *Motivated by Learning*

Four constructs were coded as Motivated by Learning. Unsurprisingly, because construing is personal to the individual, the four contrast poles were diverse. Two provided alternative motivators (money, advocacy role), one suggested a lack of willingness to learn, and one described stress as inhibiting motivation for learning. As seen in Table 6-22, the *Ideal* and *SuccessfulRemote* were construed as strongly motivated to learn. Similar to the results in some other codes, the *NoviceRemote* was potentially overwhelmed – in this instance by the amount of learning required in the job.

Table 6-22: Constructs, ratings and exemplar constructs coded to Motivated by Learning

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Rhys5,8 Not/Might: Karla8 Not/Won't: Shannon3	Motivated by learning	As for <i>Ideal</i>	Motivated by learning although may be overwhelmed by becoming established in the job	Two motivated by learning, one stressed and one motivated more to advocate for the profession

Bipolar construct examples

Learning every day and becoming better at your job as a result; inquisitive collegiate learning is encouraged and promoted; learning is valued and allowed for in the clinical day ↔ Fatigue and stress may have inhibited AH professionals' curiosity to learn [also time]. Rhys5

Motivated by wanting to learn and develop increased skills; your professional competence ↔ Motivated to advocate for the profession. Shannon3

These ratings lend support to the results in the Professional Development code where the *remote* elements were construed as facing more barriers to accessing professional development. Enthusiasm or motivation for learning could provide the tenacity necessary to pursue professional development in remote areas. The personal way this motivator was described suggests it is an intrinsic motivator inherent in the individual, rather than something provided by the workplace.

I think for a lot of them it's the learning still; like even this person who is really experienced ... still gets really into any new ideas. Karla8.683

Although not construed by many participants, **this code adds to our understanding** of what motivates AH professionals and is important because it recognises commitment to life-long professional learning which contributes to quality and safety in healthcare.

6.5.2 Approach to Culture

Two-thirds (24/34) of the participants developed at least one construct that was coded to culture. Expressed as personal attributes, the constructs revealed attitudes towards cultural considerations when providing services. There were 32 constructs in the code.

While many of the constructs referred to Aboriginal culture, there was also acknowledgement of the culturally diverse population that exists in Australia. In this sense, some participants construed that cultural competence was 'everybody's business' rather than only the remit of remote AH professionals.

In [remote] I had a higher interaction with the Indigenous population than I did in [city] but I don't really find that too different to other different types of Australians. You have to have that general understanding [of their culture] with anyone in order to be effective at all. Nina7.383

Similarly, Olivia, a novice urban participant, gave an example of a cross-cultural experience where she had to understand the wishes of a family in caring for the body of their deceased family member in a culturally appropriate way. She stated:

I would like to think that everyone is [culturally sensitive]. Olivia7.440

Kathleen, an experienced remote participant, also acknowledged that AH professionals in metropolitan areas would care for Aboriginal patients from remote areas. She respected the skills and knowledge about cultural differences developed by urban-based professionals. However, she stressed that the nuances of applying cultural knowledge to the patient and their specific community could make a critical difference to the effectiveness of the work of a remote AH professional.

It's about acknowledging that in some communities you may have to be invited before you can even go in. It's about consulting with the important people in that community before setting up a service, operating in that way. I am not saying that people who have never done it before can't do it but I am saying that I have seen it done disrespectfully in the past and ... there is the possibility of you being shut out. Kathleen7.516

As might be expected, experienced participants working in remote Aboriginal communities were able to tell stories that detailed their personal cultural learning and how that impacted service delivery and outcomes. As Steve pointed out, sometimes the service delivery and outcomes were at odds with the manager's and funder's opinions on what was important.

I just had to find other ways to influence; it was really a big source of frustration ... I sort of lost interest in the usual ways to work and I found much more exciting places to work ... like these outdoor [events]; and once I experienced the engagement of Aboriginal people in those [events], I was sold on it. 'Well, this is what I want to do. I don't care if it teaches what my bosses are after. This is good for engagement. This is good for relationship building. People are getting opportunities to [learn about health] and show what they can do. It engages a large part of the community. It has got to have a positive influence'. Steve4.579

One remote participant also pointed out that agricultural cycles inform the culture of some regions and that AH professionals must understand these to deliver effective services.

You are having to consider the cycles of farming and how it impacts on your job ... You know that at seeding and harvest times it is pointless to run any health promotion type programs or groups, you can expect that your clients would DNA [sic] or not want appointments during that time. Nicole10.338

The constructs coded to Culture were assigned to five sub-codes: Cultural-centredness; Cultural Work as Relationship-based; Valuing Cross-cultural Expertise as Specialist Knowledge; Cross-cultural Communication; and Non-judgemental Acceptance of Cultural Practices. Each sub-code will be considered separately in order to reveal the rating patterns.

6.5.2.1 Cultural-centredness

Cultural-centredness was the biggest subcode. Being culturally-centred meant the model of service delivery was intentionally designed around the cultural needs of the client population. Recognising that most AH professionals come from the dominant culture, some participants acknowledged that cross-cultural work can create discomfort for the AH professional. As a remote participant, Deanna explained:

You see them [clients] where they nominate, whether that is at home or at the kid's school or somewhere else in the community; that you maybe respect their concept of time and make a time of 'morning' or 'afternoon' instead of, say, '9.30 in the morning sharp', and you ask them when the best time of day to catch them, in terms of morning or afternoon or evening ... because that is when it is not so hot and that is when most people are around, even though it is outside of your usual work hours. Or it might be at 7 in the morning. But also ... what might be culturally comfortable for you might be using your own English assessments instead of thinking in more lateral ways of how you might look at the kid's first language. Deanna11.576

Table 6-23 summarises the constructs coded to Cultural-centredness and shows that strong culturally-centred practice was construed as *Ideal* by most participants.

Table 6-23: Constructs, ratings and exemplar constructs coded to Cultural-centredness

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Deanna11, Faye11, Ingrid9, Kirsty1, Kerrie10, Kathleen7, Nicole10, Philippa5, Rhys9, Steve4, Ursula11 Not/Might: Karla9, Natalie7 Not/Won't: Teagan8	Highly culturally-centred (one exception – see text)	Culturally-centred	Varied in ability to use culturally-centred practice	Varied in ability and limited by personal preference, inadequate knowledge or work environment constraints to use culturally-centred practice
<i>Bipolar construct examples</i>				
<i>Considering cultural issues and community needs in designing service delivery, using a wellness and primary health approach ↔ Cultural sensitivity is limited to language and communication style, a medical model using disease treatment in a hospital. Philippa5</i>				
<i>Competent in cross-cultural work relevant to your local community ↔ Lack of awareness of cross-cultural issues, not connecting with people in an appropriate and respectful way. Teagan8</i>				
<i>Willingness to adjust your practice to work with Aboriginal and Pacific Islander community; what the patient brings with them defines your practice ↔ What the practice demands defines the way services are delivered. Rhys9</i>				

Karla, a novice urban participant, construed herself as able to account for culture, but her *Ideal* was construed as working with clients from the dominant culture and therefore not facing the complexities of cross-cultural work.

It's probably something I'd rather not deal with. Karla9.797

Given her novice status and acquisition of cultural knowledge through on-the-job training, it is likely that she was struggling with the demands of simultaneously applying newly acquired clinical knowledge to the complexities of patients outside her own cultural group. If, as some participants believed, culturally-centred practice is everybody's business, then access to cross-cultural information should be more intentional and formal than simply gathered up through experience.

The constructs demonstrated the active role of the AH professional in embracing Cultural-centredness, in situating service delivery within the cultural comfort zone of the recipients. It included willingness to adjust practice so that people felt safe (Rhys9, Natalie7), creative insightful problem-solving (Ingrid9, Karla9, Steve4), accounting for cultural differences (Nicole10) and accepting difference (Ursula11). Access to cultural training helped Cultural-centredness.

Being culturally-centred was more than just understanding culture and applying broad cultural understanding to practice. It included understanding the nuances of individual communities and the cultures within them.

It is more about the specifics of the culture, you know you can be aware, you can do the orientation on culture, but to actually know the specifics of, you know, 'In our community this is how it works', or 'This person is not talking to this person', or 'You will never get that person coming to see you at the hospital because they had a bad experience at the hospital'. So it is the specifics. Nicole10.599

Presumably, the experience of the *SuccessfulRemote* allowed them to show more Cultural-centredness than the *NoviceRemote*, whereas the *HospitalOther* was construed as working within an environment that diminished their ability to be culturally-centred (Kerrie10, Rhys9). The constructs where the *HospitalOther* was rated as less culturally-centred talked about reliance on westernised appointment systems (Deanna11), including use of time (Kirsty1), venues for treatment (Deanna11), standard assessments and treatments (Deanna11, Steve4) and services based on the diagnostic medical model rather than a public health or prevention approach (Philippa5). Philippa explained that the cultural sensitivity of the *HospitalOther* was limited to cultural considerations such as language and body language use. In comparison, the *remote* AH professional had opportunities to be intentional in service delivery that accounted for community opinion about their needs and how they might best be met.

An example of that would be [town] ... The traditional appointment booking system doesn't work for them, doesn't fit in with their culture ... So we thought, 'What do the nannas and the mothers and the aunties all think about the service and how it could be improved and what was needed and what would work?' And finding that medium between the 'white' way and the 'local way', and developing stuff out of that. Philippa5.206

In summary, being Culturally-centred was construed as critical to the work success of AH professionals working in a cross-cultural context. Experience and training played a role, as did the personal willingness of the AH professional to embrace and apply cultural learning.

6.5.2.2 Cultural Work as Relationship-based

Six constructs linked successful cross-cultural work with strong relationships. The constructs emphasised the importance of relationships in providing services within a cross-cultural context. In particular, Faye, an experienced remote professional, told a number of stories that illustrated this code, and for this reason her voice is prominent in this section. Key words in the constructs were trust (Bianca7, Madeline6, Rhys10), respect (Bianca7, Tania7) and the notion of connectedness (Faye7, Rhys10, Taneesha5).

Overall, the *Ideal* was construed as having strong relationships, whereas the *HospitalOther* was construed as having professional boundaries that limited or weakened their success. Table 6-24 summarises this.

Table 6-24: Constructs, ratings and exemplar constructs coded to Cultural Work as Relationship-based

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Bianca7, Faye7, Rhys10, Tania7, Taneesha5 Not/Might: Madeline6	Cross-cultural effectiveness supported by strong relationships	Relationships only slightly less strong than <i>Ideal</i>	Relationships vary in strength with some strong, some weakened by professional boundaries	Professional boundaries on relationships weaken cross-cultural effectiveness

Bipolar construct examples

Ability to win trust of patients through developing a relationship and 'introductions' ↔ Lacking community connections. Rhys10

Respect for and awareness of environment and culture of the patient gained through home visits, cultural awareness training and spending time to get to know the person ↔ Lack of awareness of the patient's environment, using resources not specific to culture, quick turnaround implies to patient that they are not wanted. Bianca7

Function as a sounding board and a link to less remote centres ↔ Your relationship is purely brief and professional. Faye7

Several participants emphasised that successful cross-cultural work relies on being introduced into the community (Rhys10) by a trusted member. Faye explained how she brought a new member of staff into a community on an orientation visit. Because of the strength of her relationship with the community, they recognised her right to introduce someone new and conferred a measure of trust in the new person on the basis of their trust in her.

I took one of my newer people out to one of my communities, I have been going there a long time and it was quite amazing. Because it is a smaller community I tend to walk around it, and it was her first visit to the community ... And the old ladies said, 'Come on, Faye, you come sit down over here.' They put a blanket on the ground and we went and sat down and everybody came to us. And that was good. They came to us, they saw me there, they came across and we talked. Faye 7.395

Faye knew that relationship development took time but was an essential precursor to offering the best services possible. She described this as a respectful process:

Initially, you are very much a guest in their home, to [then] becoming a more accepted part of their community. You haven't been a pelican. You haven't flown in, shat on them [sic] and flown out again. You have actually driven in, been in their community for a week at a time, walked around their community, been in their homes ... so you have gone on to form important relationships. Faye7.375

By forming relationships, Faye was able to broaden her influence and professional skills to community members who previously might have been unwilling to seek help or were uninformed about what she could provide. She told a story to illustrate this.

The most valuable referral ever that you get out bush is when the Aboriginal folk themselves refer themselves. One of my best moments was, I was in a community and I had been going there for about three or four years, I guess, and

a young mum came over to me and said, 'You're Faye. You're a [profession], aren't you?' and I said, 'Yes'. 'You deal with [condition] and all that, don't you?' and I went, 'Yep'. And she said "I don't think my son is [developing] well. Can you look at him?' Faye7.389

A key difference between the *remote* elements and *Hospital/Other* was the boundaries of the relationship. A practical example given was making social conversation on topics of common interest prior talking about health issues. Similar to the code of Dual Roles discussed earlier, remote participants described how their relationships with community members frequently stepped beyond the professional realm advised, adhered to, and often preferred, in urban areas. This was considered critical to successful Indigenous cross-cultural practice by many participants.

We were given a talk, a lecture once by EASA[sic] saying about keeping professional boundaries and what you should do and how you should protect yourself in the workplace. Well, that doesn't occur out bush. You have to actually form relationships with people if you are going to achieve anything. Faye7.369

Taneesha, a remote novice, related an anecdote to illustrate her philosophy that relationships are crucial in providing effective services. After sharing this story, she went on to speak of her confusion when colleagues chided her for stepping beyond professional boundaries despite having been told at cultural orientation about the importance of relationships.

I had a 13 year old patient with a spinal condition who was in a wheelchair and she was from an Aboriginal background. And when I first met her, it was with three or four other health professionals and she hardly spoke a word. And for me that was very uncomfortable because I want my patients to talk to me, but it makes sense. You know a 13 year old, a teenager, so many people and being Aboriginal you can have the shy factor a bit, just being polite. The next session when I had the patient was just on my own, for treatment and initially it was hard getting her to speak but then after trying different things we had great conversation, laughed together. She asked me so many questions, I showed her some photos from my mobile. So you are sort of going out of the boundaries of what the universities teach you really, just talking about life story and bonding with the person, trying to make a little bit of friendship before I can get much. Taneesha 5.367

A final example of remote AH professionals intentionally stretching relationship boundaries is when they act as a link to large urban centres for remote communities. This included acting as a courier for parcels as well as purchasing supplies and taking these out to the community. Practical assistance that reduced the isolation of remote living helped forge fruitful community relationships.

In summary, the constructs in this sub-code emphasised that successful remote cross-cultural work is built through relationships that extend beyond those typically formed between AH professionals and patients in less remote areas.

6.5.2.3 Valuing Cross-cultural Expertise as Specialist Knowledge

The subcode of Valuing Cross-cultural Expertise as Specialist Knowledge includes constructs where the specialist skills and knowledge to work cross-culturally were either valued or discounted as not valuable. This is related to the code of Expertise described earlier. However, in this instance the expertise recognised is cross-cultural rather than clinical knowledge. Like other areas of expertise, acquiring cross-cultural specialist knowledge took willing effort (Taneesha6, Deanna1) and was acquired through processes that included formal training (Taneesha6), assistance from more knowledgeable others (Kerrie10) and practice (Lena11).

The six constructs were all developed by remote participants. Table 6-25 summarises the data for this subcode.

Table 6-25: Constructs, ratings and exemplar constructs coded to Valuing Cross-cultural Expertise as Specialist Knowledge

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Chloe11, Dimity3, Deanna1, Kathleen7, Lena11, Taneesha6	Cultural knowledge valued as specialised knowledge although clinical knowledge also valued in <i>Ideal</i> role	Cultural knowledge valued as specialist knowledge	Cultural knowledge moderately valued as specialist knowledge	Cultural knowledge not valued as specialised knowledge
Bipolar construct examples				
<i>Willing to learn about culture and then adapt work practices to account for culture ↔ Ignorant of impact of cultural background or not prepared or allowed to consider the cultural background of the client. Lena11</i>				
<i>Valuing culture and using that knowledge in how you provide services ↔ Culture is not valued and AH professionals apathetic to learn and value culture – just attempt to transfer the way services are delivered to 'white culture'. Unwilling to learn/care. Chloe11</i>				
<i>Specialised knowledge focusses on cultural knowledge but clinical knowledge required is less diverse and focusses on key diseases ↔ Specialised knowledge is diverse in terms of diseases and treatments. Dimity3</i>				

Most constructs recognised that service provision is enhanced by cultural expertise (Chloe11, Deanna1, Kathleen7, Lena11, Taneesha6). For Chloe, a novice remote participant, the contrast was being apathetic about the need to learn cross-cultural skills, resulting in inappropriate services.

They just want to take their white clinic from the city and just plonk it wherever they're going. Chloe11.859

The type of expertise considered relevant included detailed working knowledge of individual communities, as well as a broader grasp of how to work sensitively, understanding the key relationships in the community, and learning language. Dimity gave some practical examples of the expertise required:

So it is inappropriate for me to speak to this person because they are related in a bad way, or do I need to talk with this person with more respect than I would normally do? Or should I speak to this person with a group present or by herself? Dimity3.241

Even though only six constructs fitted this code, other participants talked about acquiring cross-cultural knowledge to support their practice. For example:

I am going down to the city for some cross-cultural training, and on-line stuff. I talk to my, you know, anybody and anyone that I can glean information from. Um, you know I try to be as sensitive as you can Tania7.520

We had an Aboriginal patient program manager come on board, and that was under me at one stage. And I did some training with some local knowledge and that was interesting and will help me heaps. Kerrie10.759

In summary, this subcode demonstrated that in the eyes of the participants, cross-cultural knowledge should be valued as specialist expertise.

6.5.2.4 Cross-cultural Communication

Four constructs, all developed by remote participants, directly referenced Cross-cultural Communication. A number of other participants talked about Cross-cultural Communication but did not end up developing a construct around it. Quotes from these participants are included. Table 6-26 summarises the constructs and ratings for this sub-code which shows the *Ideal* construed as a highly effective cross-cultural communicator.

Table 6-26: Constructs, ratings and exemplar constructs coded to Cross-cultural Communication

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Dimity2, Faye10, Leila2, Steve8	Highly effective in cross-cultural communication	Effective in cross-cultural communication	Less effective at cross-cultural communication than <i>SuccessfulRemote</i>	As for <i>NoviceRemote</i>
<i>Bipolar construct examples</i>				
<i>Communication and provision of education information includes using illustrations that people will relate to, e.g. a shield ↔ Using the standard tools to communicate and educate. Steve8</i>				
<i>Communication includes culturally appropriate body contact/touch, eye contact, word use, relating to things they know about ↔ Asks a lot of closed questions; lack ability to explain using appropriate terminology, not sensitive to when people are uncomfortable or distressed. Leila2</i>				

These constructs provide practical detail construed by participants as helpful in cross-cultural relationships. Adding advanced communication skills into the suite of relationship skills and expertise described in the previous sections can help to offset the communication disadvantage where there is no shared language between the patient and the AH professional. Remote participants described patients as speaking many languages, but English was often not their

first language. Further complicating the communication exchange was the AH professional's inability to speak the patient's language but the need to convey complex health concepts and information without using professional jargon.

The language barriers are twofold. They are speaking Aboriginal language but we are using health language. Faye10.524

Familiarity with the local language, particularly common words and cultural metaphors to associate with health concepts, were used to help offset the barriers. Steve, a long-term remote AH professional, explained his approach:

When I realised the importance of a shield then I tried to find ways of drawing on that ... to exploit it in ways that had mutual benefit. Steve8.951

Non-verbal subtleties were also critical to communication success. Using a normal, non-patronising tone of voice, allowing for extended pauses after asking a question, and being sensitive to the other person's body language were seen to optimise the communication while avoiding a condescending or badgering approach. Leila gave an example of what she considered bad practice in communication.

Someone who asks a lot of closed questions ... they lack ability to use different words and to be sensitive to someone who doesn't want to look at them. Leila2.170

Participants also explained the importance of flexibility in opening conversations with clients, particularly Indigenous clients. Although not prescriptive, they sought to establish common ground with the person they were talking with prior to addressing the health issues.

I don't have a routine of 'these are the questions that I ask'. It just comes about through explaining what I do and then, then I might notice their last name, and say, 'Oh, I know someone with that name. Are they related to you?' Or they might be wearing something associated with the football club. So then I will say something about who I support. I just look for things, or when I find out where they work I will relate that to myself so that they see [where I fit]. Leila2.201

Potentially, this approach builds the trust needed to establish an effective professional-client relationship (Pidgeon, 2015). It assists by placing the health professional into a context relative to the Indigenous person and their community (Wilson, Magarey, Jones, O'Donnell, & Kelly, 2015).

Working with interpreters to aid the communication process was seen as important in delivering effective cross-cultural healthcare. It was described as particularly critical for certain situations, including assessments and when discussing major events such as entry into permanent care.

I particularly want to use interpreters when I have family saying, 'This old lady wants to go to [residential aged care]' ... and I want to know what the old lady

really wants – because that is the person that I am representing, that is the person that I am advocating [for]. Faye8.498

However, participants cautioned against using family or untrained community members as interpreters, for a number of reasons. These included the complexity of cultural relationships that are usually unknown to the AH professional, as well as potentially compromising confidentiality and risking nondisclosure of important information.

At [remote community], they only have female interpreters; makes it difficult when you are dealing with an elderly man. And ... because of the difficulties they are having with interfamily conflict, if I am dealing with someone who comes from the other family, they can't come, or if there is an avoidance relationship they can't come. Faye8.489

Recognising the limitations of family as interpreter, it was also acknowledged that family play an important role in supporting the treatment offered by the AH professional.

I guess if it was history gathering, then speaking to the family instead of the patient if you were really not able to understand or having treatment sessions when the family is there. So the patient is more compliant and understands what you want from them. Nina7.392

Finally, making use of many different sources of information was seen as vital for supplementing the verbal information gathered and to ensure the treatment outcomes were understood and supported. Other potential sources included Aboriginal Health Workers or liaison officers, the local clinic or other health service provider staff, such as aged care staff.

If there were therapy or treatments to explain to the family I would explain it to the Aboriginal Health Workers first and then have them present when I was doing treatments or things to try to help explain the need. Nina7.392

The implications of communicating in a cross-cultural context relate to the additional time required to undertake consultations and to source additional information. Further time is required to manage the logistics of meeting with the patient with an interpreter or Aboriginal Health Worker present. Miscommunication can have adverse effects and compromise safety and quality of care. Therefore, policy regarding retention of AH professionals working in a cross-cultural context needs to consider the additional time and expertise required.

In summary, highly developed communication was a tool desired by participants who created constructs associated with this code. It was construed as increasing the effectiveness of their work in the cross-cultural context.

6.5.2.5 Non-judgemental Acceptance of Cultural Practices

Although only three constructs were coded to Non-judgemental Acceptance of Cultural Practice, it is important to distinguish it from Cultural-centredness. Non-judgemental acceptance speaks

directly to tolerance of difference, avoiding stereotyping and managing culture shock. Table 6-27 summarises the constructs and ratings for this code.

Table 6-27: Constructs, ratings and exemplar constructs coded to Non-judgemental Acceptance of Cultural Practices

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Erin6, Trish11; Ursula11	Completely non-judgemental of cultural differences	Non-judgemental	Judgemental	Judgemental
Bipolar construct examples				
<i>Tolerant of different ideas; doesn't judge, works with patients no matter where they are at ↔ We should all be the same; this is the way we do it. Erin6</i>				
<i>Culture shock requires life experience to deal with, and to avoid making judgements; accepting the cultural practices such as payback ↔ Being horrified by cultural practices. Trish11</i>				
<i>Culturally aware that things (education levels/family home life of clients/how you are seen and valued by the community) are different and being relaxed and accepting that everyone is different ↔ Closed or narrow view of the 'way' things or everyone should be; not being able to change your practice to support people from other cultures. Ursula11</i>				

While the ratings demonstrated that participants desire to be accepting and tolerant of cultural differences, they were also honest about how difficult this can be. It required openness to seeing the world through different eyes. One participant construed that life experience could reduce some of the shock from first encounters with radical cultural differences.

I am getting close to avoiding making judgements ... but still there are little moments when I go, 'My goodness, you can't possibly still be allowed to do that, surely' ... The more you do it, the more you adapt to the different changes in the culture. Trish11.400

Examples that demanded participant insight and cultural reflection included school attendance versus working the family farm (Ursula11), payback justice systems (Trish11), and child-rearing practices construed as blurring the boundary of mandatory reporting requirements (Erin6). Erin described a recent situation where she had to support a less experienced AH professional seeking to understand their responsibilities around reporting.

When [staff] go into homes they are often not as clean as they should be. They might be feeding them hot chips and fish fingers for breakfast, you know that sort of thing. And they have a different way of disciplining as well. There is probably a lot more out here who would yell or swear at their children. So it is about how that professional goes into the home – you can either go in and say, 'Look at these kids. They are well adjusted, they know that they are loved.' They look at the outcomes. Or else they can go in and think, 'How could you be well? Your mother screams at you, you do this, you do that,' and probably a little bit more idealistic, and then 'I want to go and report them to [authorities] because the house was filthy and this was happening and that was happening'. Erin6.403

Grappling with these kinds of cultural differences can be stressful. For this reason, although the number of constructs in this subcode was small, its importance lies in the insight it provides about potential threats to emotional well-being, which could influence retention of remote AH professionals. It therefore suggests that retention policies and management practices focus on proactive support. Strategies could include intentional opportunities for AH professionals to reflect on their experiences with a trusted peer, cultural educator or mentor; provision of cultural education specific to the community; and access to cultural experts in areas including law and child protection.

In summary, Non-judgemental Acceptance of Cultural Practices required AH professionals to reflect on what is their business and what is not. Experience played a role in developing this insight, as did support from others. It is suggested that policy could ensure availability of training and support that will encourage cultural openness and understanding in the AH professional and thus avoid compounding negative stereotypes or emotional ill-health arising from frustration and stress.

6.5.3 Driven

Constructs coded to Driven suggest someone who is intrinsically motivated to get on with the job. They apply themselves to work with a strong sense of professionalism, enthusiasm (Imogen2) and independence (Ursula9). They demonstrate commitment to accessing Professional Development (PD), self-regulate their professional behaviour, persist (Steve7, Imogen1) through problems, and show creativity (Chloe3, Danielle1) in solving them. The contrast poles indicate someone who works 'to rule', is prepared to accept the status quo, has trouble making decisions, or even gives up. As summarised in Table 6-28, fifteen constructs were coded to Driven.

Table 6-28: Constructs, ratings and exemplar constructs coded to Driven

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Chloe1,3, Deanna2, Erin5, Imogen1,2, Kirsty7, Kerrie4,6, Steve7, Tania6, Taneesha1, Trish9, Ursula9 Not/Might: Danielle1	Strongly driven and enthusiastic about work	Driven regarding clients, process improvements and accessing PD; has trouble saying 'no'	Less driven, needs direction and may not recognise they could influence change though persistent about obtaining PD	Less driven and prepared to accept status quo though persistent about obtaining PD
Bipolar construct examples				
<i>Drive to succeed: passion about work combined with experience ↔ Aiming to please and can't say 'no', risks disenchantment with your work. Kerrie4</i>				
<i>Persistence/obsession with finding ways through the problems, coupled with time to think [while travelling] ↔ Prepared to accept the status quo, things as they are now, nothing can be done. Steve7</i>				
<i>Big-picture focus, self-directed and self-motivated, happy to make decisions; independent in thinking ↔ Need to be assigned tasks and given directions to the task and its individual elements; not decision-maker. Erin5</i>				

As can be seen in the table, all constructs except one were developed by remote AH professionals who considered themselves suited to remote work. The *Ideal* and *SuccessfulRemote* were both construed as more strongly driven than the *NoviceRemote* and the *HospitalOther*. Potentially, the rating differences may reflect that participants construed the remote work environment as requiring more persistence.

It is ... an obsession to try to find an answer to some of these things and not giving up on myself. I don't think I have come up with a lot of solutions but been prepared to give something a shot and see how it goes. Steve7.884

Being Driven included a willingness to work harder to maintain contact with clients, an effort that may not be necessary in the hospital environment where the patients are potentially bed-bound and dependent.

Most definitely extra effort is required in this position ... A lot of people don't really understand that if you try once and you leave a message on a phone that's not really enough. In a way it is a bit hard to particularly compare this to a hospital job because they don't have to. They see inpatients. So they don't need to spend several hours there finding them. Imogen2.116

Being Driven also referred to a strong commitment to access Professional Development (e.g. Kerrie6). The ratings suggested this persistence or drive was similar across the elements. This provides further evidence of AH professional commitment to lifelong learning, fostering expertise and pursuing a career path.

In summary, Driven was construed as a dispositional attribute that was strongest in *Ideal* and weakest in *HospitalOther*. The attribute was observed in client contact, service delivery and problem-solving approaches.

6.5.4 Managing Time

The code of Managing Time includes two aspects: being organised (or disorganised); and having the ability to prioritise tasks (or becoming overwhelmed). Nine constructs were assigned to this code, summarised in Table 6-29.

Table 6-29: Constructs, ratings and exemplar constructs coded to Managing Time

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Imogen3,8, Kirsty8, Leila1, Nicole2, Trish6, Taneesha8, Ursula5 Not/Won't: Olivia2	Effective time management using prioritisation and organisation skills	As for <i>Ideal</i>	Time management is less efficient and overwhelmed by competing demands	As for <i>Ideal</i>
<i>Bipolar construct examples</i>				
<i>Organised ↔ 'Winging it' or administrative support Kirsty8</i>				
<i>Being able to manage increased time pressures and demands ↔ Stressed or overwhelmed by work pressures or demands. Imogen3</i>				
<i>Effective at prioritising patient needs ↔ Prioritising according to the schedule (e.g. patient arrival times) Trish8</i>				

As can be seen in the table, the *Ideal*, *SuccessfulRemote* and *HospitalOther* are all construed as organised and able to effectively prioritise competing work demands in comparison with the *NoviceRemote*. Thus, experience, or lack of experience, appears important. To illustrate this, Leila, a novice, explained her thorough approach to patient management:

Before I see a patient I look through their notes and talk to the doctors or nurses about them, and plan what I am going to say to them, or what questions I'm going to ask or what material I am going to use in the consultation. So that is my preparation beforehand, and making sure that I have everything with me.
Leila1.89

Thus, inexperienced professionals need to explicitly think through their approach to each patient, whereas the experienced professional has built up a body of compiled knowledge and expertise (Bordage, 1994) that allows them increased efficiency in managing clinical issues and reduces the pre- and post-consultation tasks.

Additionally, as Nicole explained, experience allows the professional to more accurately anticipate the required time for administrative tasks and session planning, as well as the benefit of well-honed processes to manage these efficiently. She pointed out that the plethora of tasks associated with patient management can overwhelm the novice.

[You need] effective time management in terms of managing a case load and all the paper load requirements and the interactions you need to have with significant others in the day ... The novice, I guess due to inexperience, needs to find a system to be efficient because at the start of things they can be very inefficient. Just how you run your day, how you fit clients in and your planning, or phoning a teacher or a paediatrician so you don't get behind. I think it all banks up and they [novice] get overwhelmed and stay back late and rack up lots of overtime or maybe don't have time to follow up certain things. Nicole2.71

Further suggestion that struggling with competing demands is related to inexperience rather than solely associated with location was provided by Olivia, an urban novice.

I am struggling every day at the moment with competing demand ... from my immediate team leader and the ward and hospital and families. So it is constant prioritising and re-prioritising, so I flounder a little bit at the moment. Olivia2.295

Given the evidence provided in Section 6.4.3, Support and Supervision, and Section 6.3.3, Professional Isolation, it is reasonable to suggest that time management inefficiencies may have greater impact on the *NoviceRemote* than on an urban novice. The compounding effects of limited access to supervision, and isolation could escalate the sense of being overwhelmed created by competing demands.

In summary, novices were construed as less effective in organisation and prioritisation skills to manage the multiple time and task demands associated with AH practice than experienced professionals. Early provision of support for time management could potentially impact positively on retention of novices in the workplace. This is particularly important for remote workplaces.

6.5.5 Philosophical Commitment

This code was used for constructs where an opinion or preference for a particular way of working was described. The constructs covered a range of ideologies, including preferences for models of work (e.g. medical, trans-disciplinary²⁶), activities such as advocacy, and professional practices such as utilising standard guidelines. Nine constructs assigned to this code are summarised in Table 6-30.

²⁶ Trans-disciplinary practice comprises sharing knowledge, skills and responsibilities across traditional disciplinary boundaries (Ruddy & Rhee, 2005). Sometimes this is referred to as skill-sharing (Greater Northern Australian Regional Training Network, 2013).

Table 6-30: Constructs, ratings and exemplar constructs coded to Philosophical Commitment

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Imogen4, Kerrie3, Natalie5, Rhys4, Steve2, Trish3	Rural advocate with preference for trans-disciplinary or group treatment focus and influenced by understanding community needs	Rural advocate with leaning towards discipline-specific clinical preference, although education and community needs influence work	Rural advocate with leaning towards discipline-specific clinical preference and evidence-based practice rather than community needs	Metro-centric thinking with focus on individuals
Not/Might: Danielle10, Madeline4				
Not/Won't: Shannon5				
<i>Bipolar construct examples</i>				
<i>Ability to use a trans-disciplinary approach ↔ Discipline-specific focus to work, and own-goal-focussed, might be due to lack of knowledge or experience or might be because someone is closed-minded and won't consider helping out. Imogen4</i>				
<i>Strategic, consultative, analytical to puzzle out what is needed by community ↔ Bureaucratic, not thoughtful, outcome wanted by health service is that a [profession-specific] service is provided regardless of whether that service is what the community needs; doesn't provide job satisfaction. Rhys4</i>				
<i>Prefer group education/public health approach ↔ Prefer 1:1 education (can be tailored to the needs of the person compared to group which is challenging and generalised). Shannon5</i>				

While the varied content in these constructs made rating patterns less obvious, there are a number of observations that can be made. The *Ideal* focussed on functional approaches, delivering services *via* group and trans-disciplinary methods that targeted community needs. The *Ideal* and *SuccessfulRemote* were construed as prioritising community needs in service delivery, whereas the others had a tendency towards discipline-specific work. In particular, the *HospitalOther* was more individual-focussed, valued the medical model and treated disease symptoms using standardised methods and best practice, with no prevention focus. The *NoviceRemote* was influenced by evidenced-based medicine and was not yet experienced or confident enough to allow patient preferences and functional needs to impact on management plans. This finding about the *NoviceRemote*, that lack of experience restricts service delivery, is confirmed in literature suggesting that new graduates are not sufficiently skilled for rural and remote practice (Greater Northern Australian Regional Training Network, 2013).

In summary, the code demonstrated differences in philosophical approaches, particularly between *HospitalOther* which used established medical system approaches to patient care, compared with *SuccessfulRemote* which favoured a functional and community-needs-based approach. The inexperience of *NoviceRemote* resulted in reliance on discipline-specific skills and difficulty adapting service delivery to community needs.

6.5.6 Independence from Significant Others

This code includes eight constructs that address the personal need to be close to or independent from family and loved ones. This was referring to physical separation, such as that required when an urban-based AH professional moves to a remote area, or when an AH professional undertakes fly in/fly out work. While the code was classified as a personal attribute, it is also related to the workplace attribute coded as Mobility/Travel, the difference being that Mobility/Travel referred directly to the demands of the job, whereas this code has an emotional component in regard to the priority placed by the AH professional on career or significant others.

As seen in Table 6-31, the *SuccessfulRemote* was construed as the most able to be independent, whereas the *HospitalOther* was more likely to be dependent. Interestingly, the ratings for *Ideal* indicate that while participants recognise that preferred work location may preclude physical closeness to family, the preference was for closer proximity than experienced by *SuccessfulRemote*.

Table 6-31: Constructs, ratings and exemplar constructs coded to Independence from Significant Others

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Bianca2, Chloe14, Kathleen5, Lena1,2, Taneesha11 Not/Might: Louise1, Natalie1	Tendency towards independence	Extremely independent	Independent	More dependent
<i>Bipolar construct examples</i>				
<i>Need to be able to cope with isolation from family ↔ Family and friends are nearby. Kathleen5</i>				
<i>Being single facilitates being able to travel ↔ Family/relationship commitments makes travel/remote work hard, torn between responsibilities (guilty). Chloe14</i>				
<i>Life stage allows work to dictate aspects of life; work can be a priority ↔ Personal responsibilities impact on work; family and other responsibilities take priority. Natalie1</i>				

Constructs included the twin concepts of being able to cope or not with separation from family, and with life-stage impacting career decisions. For example, being single and free from personal commitments was construed as better for jobs requiring travel. Further, the AH professional's independence, whether because of life-stage or personal preference, affects recruitment and retention of staff in remote areas.

I've seen so many people, they leave their job – they leave their remote job because of their partner, like hugely. And it's the people ... that live out bush, it's either their partner works remote or they're single. Chloe14.1139

In summary, this code gives insight into the AH professional's ability to cope without physical proximity to family, an ability which is influenced by life-stage responsibility and personal priorities. *Hospital/Other* and the *remote* elements were construed very differently, with *remote* being more independent.

6.5.7 Job Satisfaction

Eight constructs were coded to Job Satisfaction. The key concept in all these constructs was enjoyment of work. All constructs were expressed as a personal attribute displayed by the AH professional. Table 6-32, summarising the constructs coded to Job Satisfaction, shows marked similarity across the elements.

Table 6-32: Ratings, constructs and exemplar constructs coded to Job Satisfaction

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Bianca13, Deanna6, Fiona6, Leila9, Trish7	Highly satisfied and passionate	Satisfied	As for <i>SuccessfulRemote</i>	As for <i>SuccessfulRemote</i>
Not/Might: Danielle5,11				
Not/Won't: Karla2				
<i>Bipolar construct examples</i>				
<i>Contented in your job – it meets your needs ↔ Overwhelmed, never meeting the mark; I'm not doing good enough; the demands (for services) are too high. Danielle5</i>				
<i>Passionate about the job ↔ Bored with the job. Deanna6</i>				
<i>Job satisfaction that comes from extra challenges such as teaching/educating staff and the community ↔ Job is restricted to routine and repetitive tasks which become non-challenging (reduced job satisfaction). Trish7</i>				

The constructs described passion for work (Deanna6, Fiona6, Karla2, Leila9), commitment to the job (Leila9) and job contentment (Bianca13, Danielle5). The contrast pole varied but included feeling overwhelmed (Danielle5) or disinterested (Deanna6, Fiona6), or having low enjoyment (Danielle11). The high ratings given to the *Ideal* indicated that a high level of Job Satisfaction was preferred, although the ratings given to the other elements indicated that satisfaction is available from a range of positions.

In talking about remote work, Fiona elaborated on the difficulties but described how her passion fuelled energy to keep going. This lends support to the notion that achieving and overcoming obstacles is satisfying. Combined with the earlier code, Motivated by Challenge, the importance of positive achievement as a work incentive is emphasised.

Working in the remote area ... everything is an uphill battle but ... I am passionate about rural health. The opposite might be someone making a living. Fiona6.28

The constructs suggested that workplaces can contribute to Job Satisfaction through offering opportunities for the AH professionals to extend their skills beyond routine clinical work. In this regard, both the *Ideal* and *SuccessfulRemote* were construed as more highly satisfied than the *NoviceRemote* and *HospitalOther*. Trish, a remote AH professional, believed that novice professionals found initial Job Satisfaction in the challenge of clinical work. She then described her own experience where increased experience created opportunities for broader skill development which added to Job Satisfaction.

In a remote job and in my ideal job I would be doing the things that I enjoy more. More of the teaching, more of the communicating, more of the passing on of knowledge, whereas in a position I wouldn't like I would be doing straight clinical work for 8 hours a day. So I guess it is enjoyment of the job that drives me to do remote work and teaching rather than just being in a nice 9-5 practice. I think it is reduced job satisfaction when your job is restricted to very routine stuff, routine and repetitive. Trish7.246

In summary, this code demonstrated that AH professionals were generally construed as experiencing satisfaction in their work, regardless of location.

6.5.8 Reflective

Seven constructs were coded to Reflective. These described the ability or inability to think through and critique one's own practice. Reflection created the possibility for positive change in patient care (Kirsty14, Taneesha9) and better decision-making (Taneesha9). It included personal awareness of clinical knowledge and skill limits (Imogen6, Natalie2, Taneesha2, Ursula8), as well as professional excellence (Ursula10).

The constructs, ratings and exemplars assigned to this code are shown in Table 6-33.

Table 6-33: Constructs, ratings and exemplar constructs coded to Reflective

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Imogen6, Kirsty14, Taneesha2,9, Ursula8,10 Not/Might: Natalie2	Able to reflect on own practice	As for <i>Ideal</i>	Requires support to reflect on practice (initiated by self or others)	As for <i>Ideal</i>
<i>Bipolar construct examples</i>				
<i>Critiquing practice ↔ Self-assured/ignorant/naïve. Kirsty14</i>				
<i>Self-reflection allows me to see where I stand in terms of patient care, work ethic, team relationships, conflict resolution, take time to make a decision ↔ Less reflective means that I make decisions quickly. Taneesha9</i>				
<i>Reflective in practice and utilising self-care skills ↔ Less confident in your own professional ability and how to manage yourself and clients; require guidance and prompting. Natalie2</i>				

The table shows that experience was construed as a factor in self-reflection. The *Ideal*, *SuccessfulRemote* and *HospitalOther* were seen as able to initiate improvements in professional practice through self-reflection.

I am constantly asking myself if I have done the right thing. Kirsty14.518

In comparison, the *NoviceRemote* was rated as less insightful and requiring supportive feedback from others to develop practice. Self-reflection alone was insufficient. Ursula, a novice, admitted that asking for feedback and support to reflect was not easy.

Before I was probably less comfortable to say that I didn't know the answer. Ursula8.72

Imogen rated her *NoviceRemote* as very reluctant to seek help. Imogen construed this as lacking confidence and failure to recognise the necessity of asking for feedback.

Either trying to do everything yourself and not admitting that you need help ... or not seeking it even if you do. Having the confidence to go and say, 'I don't know what I'm doing. Can you help me?' Imogen6.296

The ratings for the *Ideal* indicate that critiquing practice through reflection is construed as an important professional attribute. Given that the *NoviceRemote* was rated as least able to self-reflect and most likely to require support to reflect, this code feeds into the Support and Supervision code, where *NoviceRemote* was also construed as least likely to have support in the workplace but most likely to require it. Therefore, remote workplaces should consider how they can best provide opportunities for supported reflection to their novices.

In summary, the ability to reflect on professional practice appeared to be construed as a function of experience rather than work location. While *Novices* appeared to need support to reflect effectively, the *NoviceRemote* particularly may not have access to the support needed.

6.5.9 Professional Confidence

Six constructs were coded to Professional Confidence. This was construed as a level of self-assurance that professional skills and knowledge were compatible with the demands of the caseload. The opposite was lacking confidence. The code, summarised in Table 6-34, seems to indicate that professional confidence is influenced more by experience than location.

Table 6-34: Constructs, ratings and exemplar constructs coded to Professional Confidence

Constructs	Ideal construed as:	SuccessfulRemote construed as:	NoviceRemote construed as:	HospitalOther construed as:
Am/Suits: Fiona1, Kylie4, Kerrie5, Philippa11, Not/Might: Natalie2 Not/Won't: Shannon1	Professionally confident	Very confident	Struggling with professional confidence	As for <i>SuccessfulRemote</i>
<i>Bipolar construct examples</i>				
<i>Confident in your work ↔ Feeling uneasy about your work competence; confidence wanes. Kerrie5</i>				
<i>Confident that you know your area very well because you work in it every day and know how to deal with it ↔</i>				
<i>Hard to be confident that you know enough and feeling like you are only 'getting by' (you don't have anyone to compare with, to check) Kylie4</i>				

Professional Confidence was not construed as related specifically to either urban or remote locations. The *NoviceRemote* was construed as least confident and most anxious about their professional practice, whereas the *SuccessfulRemote* and *HospitalOther* were both confident and independent. Kylie explained:

I think if you know an area really well you can feel quite confident in it whereas quite a lot of the time here you feel like you are just getting by with things. Kylie4.161

Kylie went on to elaborate that anxiety-provoking situations decrease Professional Confidence. The example she gave was fear that students might ask questions that she could not answer. This challenged her perception of herself as a competent professional because as a remote professional she needed to hold generalised comprehensive knowledge, rather than in-depth specialised knowledge that she construed as providing higher status.

One participant, Natalie, was very broad in her construing of Professional Confidence, extending it to include confidence in reflection, strategies for self-care, and troubleshooting workplace issues. She also believed confidence could be nurtured and gave an example of advice from her mentor to be proactive and confident in requesting feedback about a difficult situation with a manager.

And she said, 'Now as a graduate and as a professional you need to be able to do that with your boss and have that conversation with her rather than going in everyday wondering if something that you do is going to attract her attention and cause her to come down on you in a meeting like had happened to other workers'. She sort of stepped through that that is your responsibility as a professional ... She said, 'Well, that is something that I want you to do, to really build your confidence in dealing with managers.' Natalie2.195

In summary, Professional Confidence was associated with experience and therefore weaker in the *NoviceRemote*. As a self-assessed quality, Professional Confidence can be developed, but equally it can be challenged by difficult situations.

6.5.10 Adventurous

Five constructs were coded to Adventurous. The constructs described embracing change and seeking new possibilities compared with a desire for consistency. The *Ideal* was construed as more Adventurous than other elements. Table 6-35 summarises the constructs and ratings coded to Adventurous and shows the *Ideal* as the most Adventurous and *NoviceRemote* as more Adventurous than either *SuccessfulRemote* or *HospitalOther*.

Table 6-35: Constructs, ratings and exemplar constructs coded to Adventurous

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Bianca4, Chloe4, Kerrie7, Nicole7, Ursula3	Very adventurous	Adventurous although less than <i>Ideal</i> ; one enjoyed consistency	More adventurous than <i>SuccessfulRemote</i>	Less adventurous
<i>Bipolar construct examples</i>				
<i>Willing to take risks ↔ Lacking confidence to take risks; want to know that you are going to be successful. Chloe4</i>				
<i>Adventurous and act on a whim, like moving out to the middle of nowhere at a moment's notice; seeking out change ↔ Need for sameness; enjoyment of consistency in life in general. Ursula3</i>				
<i>Willing to take adventurous risks and be independent ↔ Tries to play safe, wants lots of support and is dependent. Kerrie7</i>				

Overall, the constructs in this code portrayed a dispositional or personal tendency which influenced lifestyle choices. Being Adventurous included a sense of impulsiveness regarding decisions affecting work location (Ursula3, Nicole7, Kerrie7), enthusiasm for new experiences (Bianca4, Nicole7), willingness to take risk (Chloe4, Kerrie7) and enjoyment of an outdoor lifestyle (Bianca4). The *HospitalOther* was construed as least Adventurous and in particular a person who enjoyed stability (Ursula3, Nicole7).

For one participant, the catalyst for change was a catastrophic event that caused her to reflect on what was personally important in both work and lifestyle.

Because I had had a sibling who had died, and it was about the job I was doing. Did I want to be doing this in ten years? No, I want to get out and have adventure and do stuff. Kerrie7.458

The outdoor lifestyle and opportunities for new experiences appealed to several participants. New jobs in new rural or remote locations were construed to provide options for fishing, camping and active participation in sport that were not available or had been exhausted in previous or urban locations.

The opportunities to do things you have never done before, and just a lot more outdoorsy lifestyle, I suppose. You spend your weekends exploring the region you are in ... Each job I have moved to, you spend quite a bit of time exploring that region. Nicole7.346

The ratings for *NoviceRemote* as more Adventurous than *SuccessfulRemote*, but less Adventurous than *Ideal*, suggest that life-stage influences the ability to fulfil adventurous desires. For example, Nicole noted that family responsibility had reduced her desire and ability to maintain a lifestyle that involved new jobs in new locations every couple of years.

If I wasn't settled down and with a husband and child, I probably would still be moving around, getting that kick! Nicole7.387

In summary, **remote elements were construed as Adventurous professionals** who sought new experiences both for their professional and personal lives. In contrast, the *HospitalOther* was construed as someone who was established and content in their locations.

6.5.11 Optimism

Five constructs were coded to Optimism. Concepts included in this code centred on a personal outlook of hopefulness. It included focussing on achievements (Erin3) and having resilience (Madeline1) rather than a negative approach to work and life. It was associated with being fun (Philippa10) and a willingness to have a long-term orientation (Kirsty6) where things will work out (Ursula4), rather than becoming overwhelmed. Table 6-36 summarises the code of Optimism.

Table 6-36: Constructs, ratings and exemplar constructs coded to Optimism

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Erin3, Kirsty 6, Philippa10, Ursula4	Optimistic	Optimistic	Two optimistic and three overwhelmed	Three optimistic and two more negative
Not/Might: Madeline1				
<i>Bipolar construct examples</i>				
<i>Optimistic and focussed on what has been achieved rather than what hasn't yet been done ↔ Focussed on what hasn't been achieved and on meeting timelines; frustrated if achievements not met. Erin3</i>				
<i>Having a positive outlook and energy; fun to be around ↔ Being down and negative outlook, refuse to try things. Philippa10</i>				

The table suggests that as a personal attribute, Optimism is not influenced by location. While the *Ideal* and *SuccessfulRemote* were construed as optimistic, both the *NoviceRemote* and *HospitalOther* were mixed. Ursula, a novice remote, construed herself as optimistic and suggested that both inherent Optimism and intentional attitudes to difficulties were influential.

I'm a bit of a 'She'll be all right' [person], both professionally and personally. Everything will work out fine, we just need to chip away at it ... I would go insane if I wasn't this way. I would burn out if I let myself be pessimistic and cynical.
 Ursula4.42

Similarly, Madeline, an urban novice, gave examples of things that could reduce levels of Optimism. She did not refer to these in terms of location but incidences.

More resilient and just persevering a bit more, not getting knocked down as easily [by things] like client complaints, or I guess not being successful in different bits of therapy that you try and you have to keep trying something new. I guess the extra stress of a really big caseload as well can sometimes knock a few people down. Madeline1.258

In summary, Optimism was seen as a desirable personal trait that was not specific to working in a particular location.

6.5.12 Authenticity

Only two constructs were coded to Authenticity. This code refers to acting on personal conviction, despite external pressures or, as stated by Kernis and Goldman, 'the unimpeded operation of one's true- or core-self in one's daily enterprise' (2006, p. 344).

Table 6-37: Constructs, ratings and exemplar constructs coded to Authenticity

Constructs	<i>Ideal</i> construed as:	<i>SuccessfulRemote</i> construed as:	<i>NoviceRemote</i> construed as:	<i>HospitalOther</i> construed as:
Am/Suits: Chloe5, Tania5	Fully authentic	As for <i>Ideal</i>	Not authentic	Not authentic

Bipolar construct examples

Caring and morally convicted to do the right thing by my own standards ↔ Turning a blind eye and purposefully ignorant or thinking that change is too difficult; 'This is the way things are'. Chloe5

I bring 'me' to the job ↔ Being 'me' in the role is discouraged and restricted, or I play the game (following orders, being a good employee, not challenging the system ...) Tania5

Given the small number of constructs in this code, it is difficult to make generalisations across work locations. However, it is an important code because the constructs indicated that professionals have choices about their behaviour in the work setting. For example, despite her discomfort and knowing others had purposefully ignored the problem, Chloe felt compelled to advocate for system changes that would benefit her clients.

I'm having to make stuff happen and rock the boat and yeah, make a lot of fuss when I don't like doing that. Chloe5.350

Tania described how being authentic included reflection and insight, to recognise and understand the influence of self that is present in all professional interactions.

I bring my 20-plus years' experience and the fact of who I am and my own life experience to the role. It is not just a job where I turn up, clock on, clock off.
Tania5.275

As a code that describes a way of being and interacting with others in the workplace, Authenticity is related to a number of other codes, including Dual roles, Colleague Relationships, Patient Relationships and Cultural Work as Relationship-based. The two constructs coded here were intentionally not amalgamated into any of the other codes because a qualitative fine-grained analysis of constructs stays as close as possible to the participant's words (Jankowicz, 2004).

Overall, being Authentic appeared to be construed as a personal individual difference rather than location-related.

6.6 Summary and conclusion

This chapter has presented the results of the qualitative analysis of the repertory grid interviews. Consistent with good practice, the construct was used as the unit for analysis, and codes were developed using boot strapping (Jankowicz, 2004). Coding of the 324 constructs and their ratings built a clear picture of the attributes required to work in remote areas and the attributes construed as contributing to success in professional fulfilment of work responsibilities across different locations, including remote areas. The attributes fell into three groups: those required by the workplace; those demonstrated by the individual; or those that could be either a requirement of the workplace or a personal attribute of the individual.

In summary, the major findings of this chapter are that participants did construe differences between AH professionals by location i.e. *remote* AH professionals compared with *Ideal* and *Hospital/Other*. Additionally, they construed differences that can potentially be attributed to experience.

Table 6-38 briefly recaps this chapter's findings that are specific to remote locations and remote AH professionals. It uses the overall coding framework presented at the beginning of the chapter (Table 6-1). Like the original table (6-1), it classifies the codes by attributes related to the work environment, personal attributes, and codes that overlapped both the work environment and personal attributes. The codes (listed in bold in each column) are followed by a word or phrase that summarises the findings for that code that were specific to remote AH professional roles.

Table 6-38: Coding framework summarising the construing of the sample about the remote work environment and remote AH professionals

Remote work environment attributes	Codes overlapping remote workplace and personal attributes	Personal attributes of the remote allied health professional
<p>Autonomy - available</p> <p>Role Value - less valued</p> <p>Professional Isolation - isolated</p> <p>Professional Development - more difficult to access</p> <p>Travel - required, has positive and negative impacts</p> <p>Service Orientation - need to combine evidence with experience</p> <p>Workplace Stability - higher staff turnover</p>	<p>Patient Relationships - patient-centred practice, with time for relationship development and good communication</p> <p>Expertise - specialised in being a generalist</p> <p>Support and Supervision - limited, with novices being least supported</p> <p>Flexibility - essential</p> <p>Colleague Relationships - simultaneous professional and personal relationships.</p> <p>Career Development - transferrable skills not always recognised by novices as career opportunities</p> <p>Dual Roles - professional and personal relationships with community members</p>	<p>Motivation - derived from working in an area of need and being challenged</p> <p>Approach to Culture - culturally-centred expertise emphasising relationships, communication and acceptance</p> <p>Driven - important</p> <p>Managing Time – novices require support</p> <p>Philosophical Commitment - functional needs-based approach</p> <p>Independence from Significant Others - influenced by life stage but required for remote</p> <p>Job Satisfaction - satisfied regardless of location</p> <p>Reflective - novices require support regardless of location</p> <p>Professional Confidence - weaker in novices and remote novices at risk due to insufficient support</p> <p>Adventurous - seeks new experiences</p> <p>Optimism - unrelated to location</p> <p>Authenticity - unrelated to location</p>

Recapping in more detail, the results in this chapter showed that the *SuccessfulRemote* was construed as an autonomous professional with good job satisfaction who developed strong relationships with patients, colleagues and the community. These relationships were valued, provided motivation and were seen to improve quality of care. Their expertise lay in the breadth of professional knowledge and successful cross-cultural service provision. However, they felt this expertise was often unrecognised and their services not truly valued. While a generalist approach was necessary because of geographic isolation and lack of alternative services, it also resulted in a sense of inadequate support for developing a clear career path. Individuals often developed personal solutions to reduce professional isolation and maintain professional confidence. Strengths were seen in their flexibility, drive, time management, professional confidence, independence and adventurous approach.

In contrast, the *NoviceRemote*'s lack of experience created a number of risk factors for them, professionally and personally. They were construed as potentially being overwhelmed and professionally challenged by caseload and time management issues, as well as the demand for

generalist and cross-cultural skills. The professional isolation and insufficient supervision and support, combined with limited recognition of their services and poorly defined work roles, all potentially undermined long-term retention. While they were construed as being independent from family, the experiences of some remote novices suggested local support might help offset the challenges. Despite the risk factors, the *NoviceRemote* was construed as satisfied in the job.

The *HospitalOther* was construed quite differently from the *remote* elements. While they were construed as working in professional silos, constrained by systems and logistically unable to form long-term relationships with community or patients, the attractiveness of their roles lay in their perceived expertise and the way their roles were valued by other health professionals and patients. Further, they were seen to have strong opportunities for career development, and their specialisation was seen to guide their professional development plans.

It is important to recognise that the workplace attributes and personal attributes interact, affecting professional performance and contributing to recruitment and retention outcomes. This interaction can be positive or negative. As pointed out in a nursing study, but also applicable to the AH professional work environment:

The more disorganised, inconsistent, under-staffed, over-stretched and hostile an environment, the more difficult it is for any nurse to demonstrate any of the identified ideal attributes (March & McPherson, 1996, p. 816)

Recruitment and retention of AH professionals in remote areas could potentially be improved with policy changes addressing those workplace attributes that were negative. Additionally, retention may be positively affected if the expectations of new recruits are realistic, while support for AH professionals in regard to personal attributes that assist in dealing with the demands of remote work may also be helpful.

The next chapter will examine the elements in detail, using a quantitative approach. As the elements are discussed, the reader will recognise in the examples, some of the constructs and codes explicitly detailed here.

Chapter 7

Strand 2 Results: Analysis of the Elements

7 Strand 2 Results: Analysis of the elements

This chapter will take an idiographic or person-centred approach (Grice, Jackson, & McDaniel, 2006), looking across the sample to compare how individuals construed themselves and whether these constructs were similar to, or different from, other AH professional roles. It will do this by focussing on the elements, the work roles used in the repertory grid interview²⁷. The use of consistent elements across participants, combined with the ratings on the elements by participants, allows comparison across grids from the entire sample (Jankowicz, 2004). The similarity or difference between elements will be calculated using statistical data reduction methods and presented graphically. This information will add to the picture of the factors that may influence success in recruitment and retention of AH workforce in remote areas.

The research question, ‘How do allied health professionals construe themselves and others in relation to working in remote areas?’, makes the data related to the remote elements of most interest. Therefore, this chapter will particularly focus on comparisons between four elements: *Current* and *Ideal* in relation to *SuccessfulRemote* and *NoviceRemote*. The *HospitalOther* is included at times to align with Chapter 6 which analysed the constructs, and *NextJob* is also discussed. Occasional references to other elements are incorporated where relevant. To review all twelve elements, refer to Table 3.6 in Chapter 3; however, Table 7-1 below is a quick reference for the most important elements to be covered in the present chapter.

Table 7-1: Element labels and their abbreviations

Element title used in grid	Abbreviation for text and tables	Abbreviation for figures and charts
Myself as I am currently*	<i>Current</i>	Current
Myself in my ideal job*#	<i>Ideal</i>	Ideal
Most successful remote practitioner	<i>SuccessfulRemote</i>	Suc.Remote
Novice remote practitioner	<i>NoviceRemote</i>	Nov.Remote
Someone else in a hospital	<i>HospitalOther</i>	Hosp.Other
Myself in my next job*	<i>NextJob</i>	Next job

*Self elements

Represented the characteristics or attributes valued in a work role

²⁷ A repertory grid provides three types of data – the elements, constructs and ratings. The previous chapter analysed the constructs. In this chapter the analysis accounts for the elements and their ratings.

As an idiographic analysis, this chapter will present and discuss the repertory grid data from the perspective of the individual and the subset, or group, of the sample to which he or she belongs. The groupings were based on the demographic attributes described in Section 5.1.2:

- self-assessed suitedness for remote (see also Section 5.1.5 and Table 5.3)
- location of experience (Remote/Urban)
- amount of professional experience, (Novice, Early Career, Experienced).

This created seven groups in the sample. As seen in Table 7-2 below, the number of participants in each group varied. However, in an idiographic approach (Grice et al., 2006; Lamiell, 1998), the focus is on individuals, and the subset size is less important. The column titled 'Legend Marker' shows the marker used in the figures in this chapter for members of that group.

Table 7-2: Strand 2 sample by experience and self-assessed suitedness to remote

Self-assessed suitedness	Professional and location experience	Participants in group	Legend marker for group used in figures
Am/Suits	Novice Remote (NovRem)	Chloe, Dimity, Imogen, Kirsty, Kylie, Leila, Lena, Rhys, Taneesha, Ursula	■
Am/Suits	Early Career Remote (EarlyCarRem)	Bianca, Deanna, Philippa	■
Am/Suits	Experienced Remote (ExpRem)	Nicole, Erin, Faye, Fiona, Ingrid, Kathleen, Kerry, Steve, Tania, Trish	■
Did/Won't	Novice Remote*	Nina	⊗
Not/Might	Novice Urban	Ben, Louise, Karla, Madeline, Natalie	●
Not/Might	Early Career Urban (EarlyCarUrb)	Danielle	●
Not/Won't	Novice Urban (NovUrb)	Laura, Olivia, Shannon, Teagan	●

* previously worked in remote but not interested in returning

The statistical data reduction methods to analyse the elements and the ratings of the elements were undertaken in Idiogrid (Grice, 2002), as described in Chapter 3. Given the complexity of the data and the analysis, a summary of the statistical process will be provided prior to presenting the results. Each section will add new information to answer the overarching question, 'How do allied health professionals construe themselves and others in relation to working in remote areas?'

The first section will look at distances between the selected elements across the whole sample using a standardised measure, the double-scaled Euclidean distance (Barrett, 2005). This will provide evidence for the sample's career direction and job satisfaction, their current construing about working in remote areas, and their likely aspirations to work in remote areas.

This will be followed by selected case studies, analysed using singular value decomposition (SVD) plots (Bell, 2004; Grice, 2002). The case studies illustrate the characteristics of the construing of various groups within the sample. The SVD plot is a two-dimensional graphical representation of a single grid that accounts for the elements, ratings and constructs. The importance of looking at these case studies is that they bring the constructs back into focus, while simultaneously showing the alignment of the participants' construing about AH professionals who work in remote and urban workplaces. The case studies will also bring the Strand 1 data back into focus. As well as demographic data and personal history, including priorities regarding career decision-making, the Temperament and Character Inventory (TCI) scores for each individual will be presented and discussed. Potential explanations for the individual's Strand 1 and Strand 2 data will be suggested.

7.1 Distances between elements: Looking across the sample

Euclidean distance assesses similarity among pairs of elements (Leach et al., 2001). In this section, double-scaled Euclidean distance (Barrett, 2005; Grice, 2002) will facilitate comparison of specific elements across all grids. As described in the methods, double-scaled Euclidean distance is unaffected by the number of constructs in each grid, allowing meaningful comparison of the distance between a pair of elements in one grid with the same pair of elements in other grids (Grice, 2002).

The double-scaled Euclidean distance calculation analyses the distance between the two elements specified by the researcher, for example, the distance between *Current* and *Ideal* elements. The results of double-scaled Euclidean distance calculations fall between zero and one. A distance of zero means maximum similarity between the elements being compared, i.e. the two elements were construed identically. In comparison, a distance of one means maximum dissimilarity between the elements, i.e. they were construed totally differently from each other. By extension, distances less than 0.5 mean the elements being compared are more like each other than unlike, while distances greater than 0.5 are more unlike than like each other. There are no statistical significance statistics associated with double-scaled Euclidean distances, the method simply reveals whether the two elements being compared are more or less alike.

For convenience, the phrase, ‘the distance’, or the expression, D_{xy} ²⁸, will be used at times to refer to the results of the double-scaled Euclidean distance calculation between two elements.

Four pairs of elements will now be compared with each other. In each section, the meaning of the distance will be proposed, a figure will plot the distances between the elements across the entire sample, and specific results from subsets of the sample and individuals will be discussed.

7.1.1 The distance between *Current* and *Ideal*: Job satisfaction

Understanding job satisfaction is important because participants located in remote areas who are satisfied in their jobs may potentially be retained for longer, which would be good news for remote workplaces and residents. Equally, urban participants who are satisfied in their jobs may be less likely to consider migrating to remote areas and more likely to remain in urban areas. Further, an urban AH professional who is dissatisfied may potentially be open to thinking about applying for a remote position.

Analysing the congruence between ideal-current/actual is a recognised approach to understanding job satisfaction (Hardin & Donaldson, 2014; Higgins, 1987; Weinberg & Tittle, 1987). Potentially then, the distance between participants’ *Current* job and their *Ideal* could indicate how satisfied they were in their current employment. Someone whose *Current* was close to *Ideal* would be satisfied, compared with someone whose *Current* was distant from *Ideal*. Remembering that ratings for the *Current* element represented participant construing about the job they held when interviewed, and *Ideal* represented their construing about the ‘perfect’ job or the ‘representation of his aim or direction of desired movement’ (Norris & Makhoul-Norris, 1976, p. 80), the distance between the two could be considered an indication of job satisfaction. Greater discrepancy or distance would be indicative of less satisfaction.

Thus, the double-scaled Euclidean distance between *Current* and *Ideal* was computed for all participants. The markers in Figure 7-1 show the distance between *Current* and *Ideal* for each participant. Participants are categorised along the horizontal axis according to the subset to which they belong, i.e. self-assessed suitedness together with professional and remote experience (See Table 7-2). The vertical axis is the double-scaled Euclidean distance, with zero being maximum similarity and one being maximum dissimilarity between the two elements being compared, in this case, *Current* and *Ideal*. Participants named in the figure will be discussed.

²⁸ x and y represent the two elements being compared

Knowing that a score at, or close to, zero means perfect or very close similarity between the elements, participants with a score closer to zero would likely be more satisfied than those with scores closer to one.

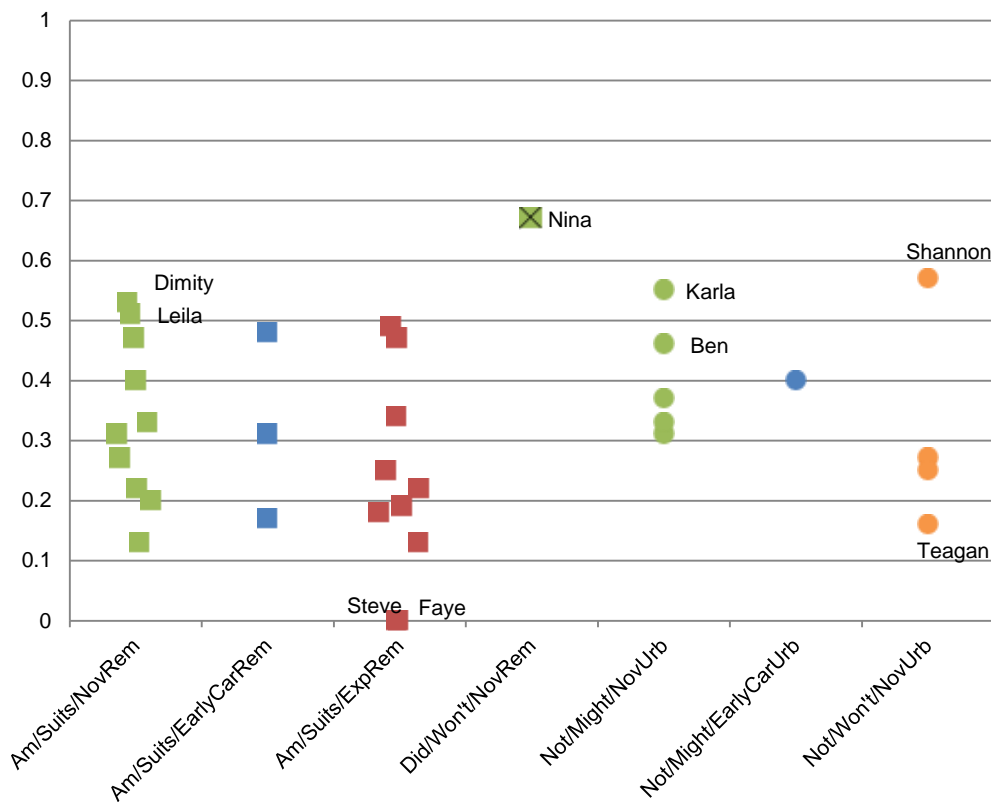


Figure 7-1: Double-scaled Euclidean distance between *Current* and *Ideal* elements for the sample

Given that there is no statistical significance score when examining Euclidean distances, it was decided to consider $D_{xy} \leq 0.4$ as satisfied. This means that there are more similarities than differences between *Current* and *Ideal*. Figure 7-1 shows that the majority of the sample (24/34) construe their *Current* as more like, than unlike, their *Ideal* position ($D_{xy} \leq 0.4$). Arguably, these participants are satisfied overall. Looking within each of the seven groups, most have a majority of participants with $D_{xy} \leq 0.4$, i.e. their *Current* is more like than unlike their *Ideal* and they are potentially relatively satisfied.

Note that two remote participants in the Am/Suits/ExpRem group (Faye, Steve) have zero distance between their *Ideal* and *Current* position indicating maximum similarity. They construe their *Current* work in remote identically to their *Ideal* work. These participants appear the most satisfied, and further it could be argued on the basis of this maximum similarity that their *Ideal* would be located in remote.

Only five participants have a distance more than 0.5 (i.e. $D_{xy} \geq 0.5$), indicating that their *Current* position is more unlike, than like, their *Ideal* position. These are potentially the participants

experiencing the greatest levels of job dissatisfaction. These participants will now be investigated in more detail in an attempt to understand their dissatisfaction to see if it offers any insight into recruitment or retention in remote areas.

Nina is the participant with the most distance ($D_{xy} = 0.67$) between her *Current* and *Ideal* job. She categorised herself as 'Not/Won't', specifically commenting in her Strand 1 survey, '*I did work remotely and it suited me for a certain period of time.*' Although her background was urban (childhood and university training location), she undertook rural placements during her training.

When Nina participated in Strand 1 of this research she was working in a remote position, her first job, a sole AH professional based at a local hospital in an RA4²⁹ town about three hours away from a major city. While her main responsibilities were community-based, some inpatient tasks, mainly aged care, were also required. She described the scope as '*basically everything under the sun*' (Nina0.7). During this period she felt isolated and unsupported but remained about 12 months longer than planned because of fear that the job would remain vacant after her departure.

I knew that if I left, the chance of them getting someone was going to be very, very minimal. Nina8:436

By the time of the Strand 2 interview she had changed jobs and had been working for five months in an acute hospital in the major city. Although reporting that most of her university friends had rural backgrounds, she described herself as:

More city than country ... I am not the kind of person who would live in the country for the rest of my life. Nina0.21

She commented that working in isolation in remote areas as a new graduate was probably not very effective for patients.

What I find is disappointing is that country people don't get the best service a lot of the time. Like I feel that me going out there as a new grad, I wasn't giving them the best service I possibly could, compared with if someone with experience was there. Nina8.444

So although she experienced dissatisfaction with her remote position, Nina's double-scaled Euclidean distance between *Current* and *Ideal* indicate that she has not found her current position in the metropolitan hospital to be perfect, either. Looking qualitatively at her constructs and ratings, it can be seen that the dissatisfaction in urban work stems from the high level of bureaucracy and medical dominance rather than holistic care, and the limited time for patients

²⁹ RA4 refers to Remote using the Australian Standard Geographical Classification of Remoteness Areas (Australian Institute of Health and Welfare, 2004).

where only the essentials to ensure safety can be completed prior to patient discharge. These disadvantages appear, however, to be offset by the benefit of increased confidence as a clinician because of the supported learning available.

I think the skills I have got from working in a hospital even for four to five months, I feel like I would be so much better of a therapist out in the community again. If I had gone to a hospital first, and then to [remote town], I would have definitely been a better therapist just from that initial supervision. Nina8.426

The benefit of this supervision to support learning and development as a clinician appeared critical to Nina. She described it in a construct where both her *Current* and *Ideal* elements provide:

Structured but flexible supervision and as much as you need [compared with both previous and NoviceRemote who experience] minimal supervision by a senior in your profession and support is far away. Nina3.148

In summary, Nina was recruited to a remote area despite minimal experience. The lack of support she experienced at a vulnerable point in her career appears a major factor in her migration back to urban areas. Despite this, discrepancies seen between *Ideal* and *Current* point to Nina's preference for having time for a holistic rather than medical approach, which she experienced in the remote but not urban work.

Shannon also had a large distance between her *Current* compared with how she construed her *Ideal* ($D_{xy} = 0.57$). As a Not/Won't/NovUrb, Shannon had no intention of working in remote areas. She commented that her *Ideal* job would be in a hospital, and both her *Current* and *Ideal* elements were distant from her *SuccessfulRemote* element ($D_{xy} = 0.9$; $D_{xy} = 0.6$ respectively).

Raised in a remote area, Shannon attended a metropolitan university and did not have any rural student placements. Her first (and current) position was in a major tertiary hospital in a capital city. Several times during the interview she mentioned financial reasons tying her to urban areas.

Having worked for ten months, Shannon has enjoyed support and supervision from 'people here that I go to for help or reassurance' (Shannon1.242). These have included an on-site supervisor, a professional mentor with whom she meets monthly, and workplace colleagues. She spoke of being confident now to move away from the safety net of supervision and work more independently.

My workload has changed into more senior areas and so because I'm not well-educated in those areas, like I research what to do, but if it's something really complicated I'll just go to someone and say, 'This is what I'm thinking about doing. Would you do anything differently?' Shannon1.270

Her professional growth towards independence is also seen in the confidence she expressed in her competence and a growing desire to advocate for her profession and even work in a position where she has to establish services. She believed that rural and remote AH professionals had to set services up frequently, including tasks such as developing the treatment protocols and policies.

An additional distinctive factor about Shannon is the guilt she expressed about choosing to work in an urban area. Growing up in a remote area and receiving a study scholarship for remote origin students had resulted in a sense of obligation to return to work as a remote practitioner. Her subsequent decision to work in the city created emotional conflict, particularly at the guilt she carried due to remaining in an urban area.

I'm sort of torn. It's really hard because I always thought that I would want to go back to a rural area and practise because I've grown up in a remote area and I knew definitely that I didn't want to go back to a remote area, because that was just too hard. Shannon6.809

In summary, Shannon does not appear satisfied in her current role. However, she did not believe that she would work in remote areas, despite her personal ties.

Dimity and Leila were both remote novice professionals with more distance than the majority of remote participants between their *Current* and *Ideal* ($D_{xy} = 0.51$; $D_{xy} = 0.53$ respectively), i.e. they are potentially dissatisfied. Although they claim that working in remote suits them, (Am/Suits/NovRem), they are novices who appear at risk of becoming disenfranchised or burnt out. Examining their constructs and ratings helped explain the gap between *Current* and *Ideal*. Their *Current* lacked professional support and had a poorly defined role. Further, they construed their *Current* position, their role, as not particularly valued by clients and clinic staff. Both Dimity and Leila had grown up in the region they were working in and had undertaken supported student placements there prior to commencing their first jobs. These two factors may have potentially increased their personal and professional networks and personal resilience to tolerate the job difficulties and off-set the discrepancies between *Current* and *Ideal*. So, despite a strong connection with remote areas, reduced job satisfaction makes retention in remote areas seem less certain for Dimity and Leila.

As Karla and Ben were both urban-based novices open to working in remote areas, (Not/Might/NovUrb), it is not surprising that there is some distance ($D_{xy} = 0.55$; $D_{xy} = 0.46$ respectively) between *Current* and *Ideal*. Karla's only experiences of remote were a student placement in a small regional hospital and a secondary school visit to a remote Aboriginal and mining community. In her *Ideal* she would hold specialised knowledge compared with her *Current* which demanded generalised knowledge, and interestingly her *Ideal* patient group comprised the dominant culture rather than a cross-cultural patient context. Potentially, if Karla

was recruited to remote work she would only be retained if there was a shift in her construing about specialised knowledge and culture.

Ben's *Current* position was in a capital city tertiary hospital, whereas his *Ideal* was in a remote area. Like Nina, his *Ideal* provided service delivery based on holistic patient-centred approaches rather than a bureaucratic medical hierarchy. He gave an example of what he believed to be compromised patient care that he had witnessed the day of interview, where the medical hierarchy failed to account for the patient's entire condition.

She [the doctor] made a decision that is going to make things very, very difficult for the patient and I think that she saw things from a very, very narrow point of view. Ben 3.163

In contrast, Teagan (Not/Won't/NovUrb), an urban novice who expressed satisfaction with and enthusiasm about her work and clearly had no intention to work in remote, had much less distance between *Current* and *Ideal* ($D_{xy} = 0.25$). Teagan will be presented as a case study at the end of the chapter.

Overall, the individual aspirations of the participants about their work location as revealed in their constructs and interview transcripts, appeared congruent with the double-scaled Euclidean distances, supporting the premise that the distance between *Current* and *Ideal* is an indicator of job satisfaction, with smaller distances indicating increased satisfaction compared with greater distance. Further, the similarity or closeness between *Current* and *Ideal* ($D_{xy} \leq 0.4$) for most of the sample indicated a reasonably high level of satisfaction with their current positions. Potentially, this means recruitment of people from urban to remote areas is less likely if they are satisfied in their job than if they are dissatisfied. Nina, Dimity and Leila are reminders that recruitment of novices to remote positions needs to be accompanied by strong professional and personal support to assist retention.

7.1.2 The distance between *Current* and *SuccessfulRemote*: Alignment

The double-scaled Euclidean distance between *Current* and *SuccessfulRemote* elements was computed for all participants. Remembering that the ratings for the *Current* element represented participants' construing about the job they held at the time of interview, and the *SuccessfulRemote* represented their construing about an AH professional they considered working successfully in a remote area, the distance between these two elements could potentially indicate alignment with working in remote. If a participant was not working remotely but construed *SuccessfulRemote* as similar to *Current*, this could indicate receptiveness to remote work, i.e. recruitment potential.

The distances for each participant between *Current* and *SuccessfulRemote* are plotted in Figure 7-2. As in the previous figure, the vertical axis represents the double-scaled Euclidean distance,

where zero is maximum similarity and one is maximum dissimilarity between the two elements being compared.

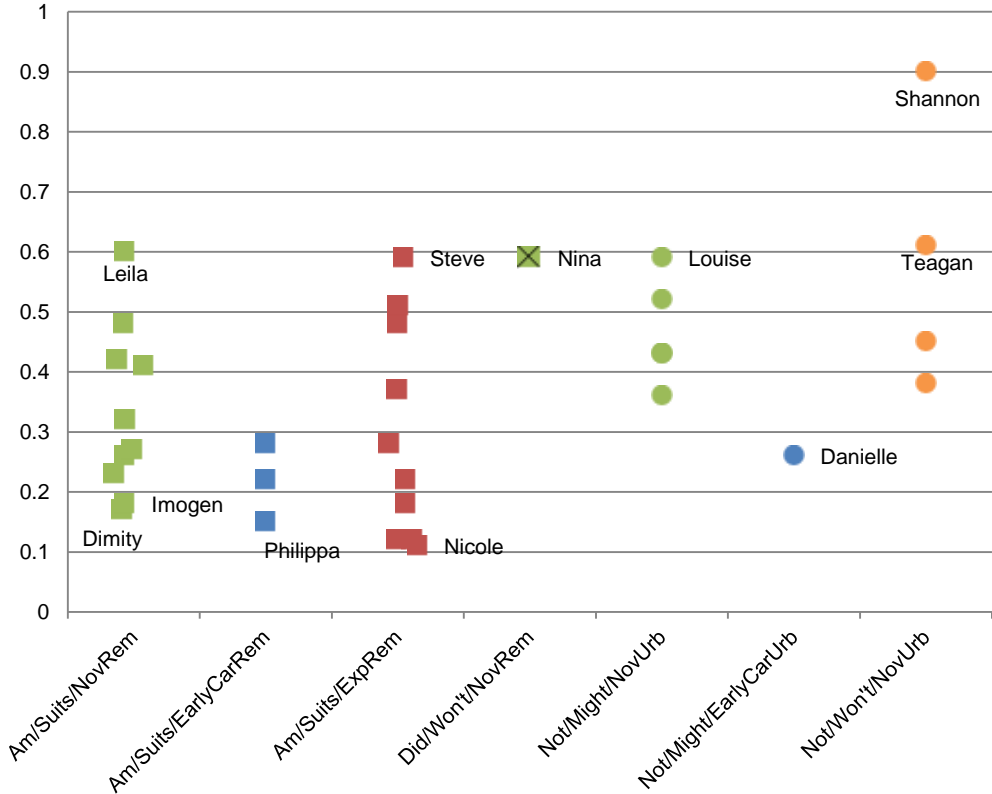


Figure 7-2: Double-scaled Euclidean distance between *Current* and *SuccessfulRemote* across the sample

Figure 7-2 shows a high proportion (21/23) of participants working in remote rated their *Current* as more similar to, than different from, *SuccessfulRemote* ($D_{xy} \geq 0.5$). This means that despite potential individual differences between themselves and the AH professional they selected as their *SuccessfulRemote*, they still construed more similarities than differences, suggesting alignment with remote.

Perhaps unsurprisingly, the subsets currently working in urban (Not/Might, Not/Won't, Did/Won't) had greater distances between *Current* and *SuccessfulRemote*. With the exception of Danielle, who had more experience than the novices and who undertook student placements in very remote areas, all the urban-based participants have a distance of 0.36 and above, with Shannon construing her *Current* as very different from *SuccessfulRemote* ($D_{xy} = 0.9$). This indicates very poor alignment with remote areas. The large distance between *Current* and *SuccessfulRemote* ($D_{xy} = 0.59$) seen for Nina, a former remote novice currently in an urban area, indicates she may value the characteristics of remote work even though she plans to remain in urban.

The distances between *Current* and *SuccessfulRemote* for the Not/Wont NovUrb subset align with their self-assessed lack of suitability for remote work. In the figure it can be seen that this group of participants have greater distance between *Current* and *SuccessfulRemote* than two-thirds of the sample; i.e. the ratings on their constructs show they construed their current work roles as very different from *SuccessfulRemote*. In particular, Shannon is close to maximum dissimilarity ($D_{xy} = 0.9$), and Teagan is second most dissimilar ($D_{xy} = 0.61$). Shannon's story was presented in some detail in the first section on distance between *Current* and *Ideal* (job satisfaction), while Teagan will be presented as a case study at the end of the chapter.

In summary, it can be seen that most remote participants construed themselves in their *Current* positions as similar to, or aligned with the AH professional they construed as *SuccessfulRemote*. This augers well for retention. It is also clear that there is greater distance between the urban-based AH professionals and the *SuccessfulRemote* element. Potentially, this means recruitment of urban-based AH professionals is likely to be less successful, provided they are satisfied in their jobs, because their construing about *SuccessfulRemote* is not aligned with *Current*.

7.1.3 The distance between *SuccessfulRemote* and *Ideal*: Identification

While the double-scaled Euclidean distance between *Current* and *Ideal* may indicate job satisfaction, the distance between *SuccessfulRemote* and *Ideal* may suggest identification with working in remote and possibly link with recruitment and retention potential. If the distance between *Ideal* and *SuccessfulRemote* is small, it means the participant construed the *SuccessfulRemote* as like their *Ideal*. Following this logic, then, it is possible that participants whose *Ideal* and *SuccessfulRemote* were close could be more open to recruitment to remote (if not already there), or retained in an existing remote role.

The previous chapter analysing the constructs delineated how the *SuccessfulRemote* was construed by participants. However, it did not show how many construed their *Ideal* as like *SuccessfulRemote*. This section will address that question.

Figure 7-3 shows the double-scaled Euclidean distances between each participant's *Ideal* and *SuccessfulRemote*. As in the previous figure, a distance of zero indicates maximum similarity or likeness between the elements and a distance of one indicates maximum dissimilarity.

Overall, a large proportion (29/34) of the total sample construed their *Ideal* more like ($D_{xy} \leq 0.5$) than unlike *SuccessfulRemote*.

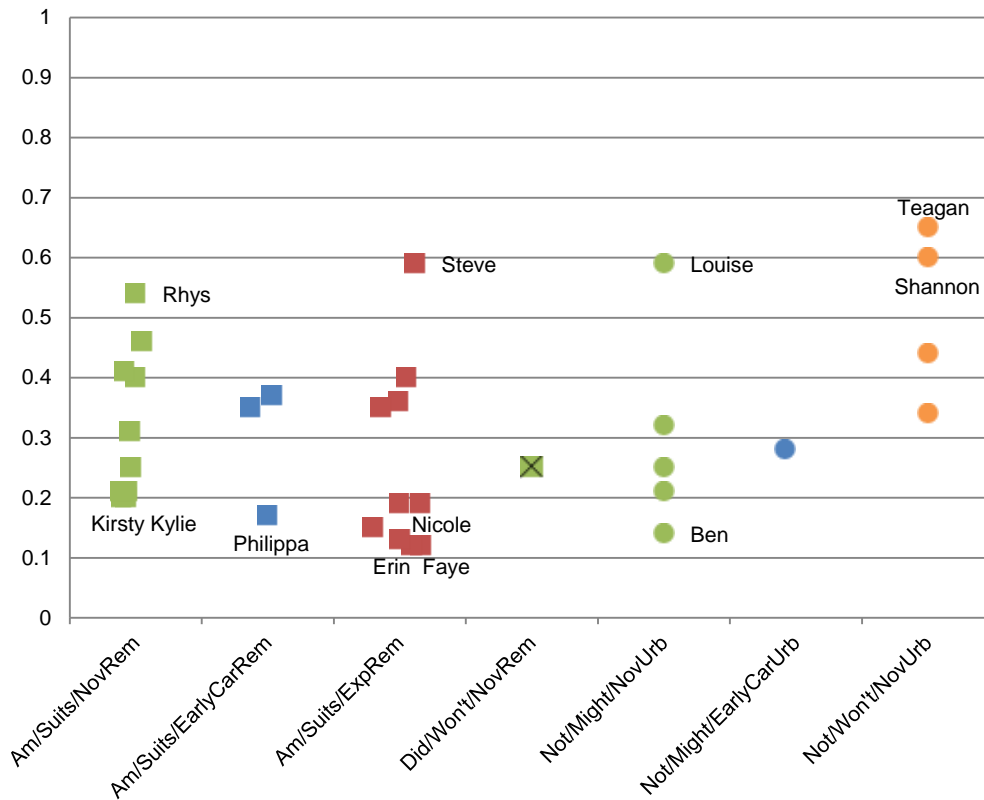


Figure 7-3: Double-scaled Euclidean distance between *Ideal* and *SuccessfulRemote* across the sample

While no participant construed their *Ideal* as identical to their *SuccessfulRemote*, ten participants had a distance of 0.2 or less between the two elements. Of these ten, all were currently working in remote except Ben (Not/Might/NovUrb) who expressed remote work intention.

A number of the participants will now be discussed further, with reference to constructs that may assist in interpreting how they construe working in remote areas. This will reveal whether or not they appear to identify with working in remote areas. The participants discussed are labelled in Figure 7-3 and were selected because their *Ideal* is particularly close to or distant from *SuccessfulRemote*.

Three of the four participants with least distance between *SuccessfulRemote* and *Ideal* (Faye, $D_{xy} = 0.12$; Erin, $D_{xy} = 0.12$; Nicole, $D_{xy} = 0.13$) were experienced AH professionals working in remote areas. One was an urban novice with intention to work in remote (Ben, $D_{xy} = 0.14$). Erin and Faye had both worked in remote for more than ten years. However, Faye was near retirement while Erin was younger with primary-school-aged children. Nicole expected to remain in a remote area for the foreseeable future as she had married a local and had young children.

As shown, Faye construed both *Current* and *Ideal* ($D_{xy} = 0.12$) like *SuccessfulRemote*. Even though this clustering indicates good job satisfaction, as well as alignment and identification with remote work, Faye was reserved about claiming success in remote work.

I don't know that many of us are very successful in rural and remote because there are so many barriers. Faye0.13

Faye's *Current* role provided her with professional autonomy in a team of colleagues who based their relationships on mutual respect for professional expertise, and who humbly approached client needs from a relational and holistic perspective.

We respect each other's professions and boundaries ... They become more than just a team, just another professional; you know them much better, and we all support each other in many ways. Faye4.110

Her role required working with Indigenous people, and Faye described the relationship between an AH professional and their clients as critical to achieving change.

When you go to an Aboriginal community you are really in their home and if you want to achieve anything you have to form a relationship ... They [Aboriginal people] probably have more power than I do. It certainly starts out like that, with them having all the power and you having none. But as your relationship grows you then get to a more even base. Faye5.193

She saw a strong contrast between the model of care she used and the medical model. She was clear that she wouldn't enjoy working in a hospital, explaining that she didn't 'like doctors and their power' (Faye0.19). She provided further clarification by describing the gap between a medical model based on funding and unequal decision-making, compared with a holistic approach to patient healthcare.

Often doctors won't keep the clients in long enough for you to do the amount of work that needs to be done. We sometimes think they should be kept in an extra couple of days but because they are 'medically stable' we can discharge them. And particularly with working out rural and remote, they are often in no fit state to go home and [yet] they put them on a bush bus and send them home. Faye1.40

Clearly, Faye is describing care she deems as inadequate because it has not accounted fully for the patient's needs. Yet, she appears to feel powerless against the medical system to influence change.

Erin also construed *SuccessfulRemote* and *Ideal* as alike. Her constructs indicated that she construed them both as optimistic, tolerant of difference, collaborative and having a problem-solving approach. Like Faye, she construed her *Hospital-based* elements very differently from *remote* elements.

Kirsty and Kylie were the NoviceRemote participants whose *Ideal* was closest to *SuccessfulRemote*. Like Faye and Erin, Kirsty and Kylie both construed *SuccessfulRemote* as able to deliver the service the community required, regardless of whether that appeared inefficient in terms of time. Both described working in a model where large travel times for small patient loads was accepted as a normal part of service provision rather than considered inefficient because of the small numbers. For example:

If we travel for 3 hours each way and only see 3 patients that is OK ... Just because there are only 3 people in the town who need to be seen doesn't mean they need to wait 6 months to be seen until you have 8 people. Kylie 6.410

For Kirsty, a NoviceRemote providing services in Indigenous communities, the time factor also included time to learn culturally-specific information and get to know patients before providing healthcare solutions. She had observed compromised health outcomes because professionals had not taken time to fully understand how cultural issues were influencing patients' healthcare access and follow-up, for example, by not finding a culturally appropriate decision-maker.

Philippa, EarlyCareerRemote, also echoed the other remote participants who construed their *SuccessfulRemote* and *Ideal* similarly. Key factors were taking time and a holistic approach, considering culture, and building long-term relationships.

In a hospital job you might try to be culturally sensitive or considering language and body language, but that is as far as you can go with a 1:1 in the hospital, compared to rural where you can look at the whole service and how it is going to be delivered. Philippa5.234

Not unexpectedly, Shannon and Teagan, both UrbanNovices, neither with interest in working remotely, showed the furthest distance between *SuccessfulRemote* and *Ideal* ($D_{xy} = 0.6$; $D_{xy} = 0.65$ respectively). This means that their *Ideal* is quite different from how they construe someone who was successfully working in a remote area, and they would appear not to identify with working in remote areas or as a potential remote AH professional. The comparatively large distance between the *SuccessfulRemote* and *Ideal* also gives credence to their stated intention of remaining in urban work rather than considering a position in remote.

Louise, UrbanNovice, categorised herself in this way: 'I am not working in remote but might work there sometime. I think it would suit me'. This belief is difficult to understand, given the relatively large distance between her *Ideal* and *SuccessfulRemote* ($D_{xy} = 0.59$), suggesting that she does not identify readily with other remote AH professionals. Examining her constructs, interview transcript and demographic data can assist to explain this apparent ambiguity and potentially provide clues to Louise's likely recruitment and retention success.

When interviewed, Louise was a novice urban AH professional working in a capital city hospital associated with a large urban health service. She had been in a new graduate position for nine months. In this position she had rotated through several different wards in the major hospital and spent three months each at two smaller hospitals attached to the health service. While the frequent moves had been slightly destabilising, Louise valued the numerous and varied learning opportunities and felt she had gained broad experience. Her student placements had also been in metropolitan hospitals. At the time of her interview, Louise's contract was nearly finished, but she was hopeful of securing more work in the hospital, preferably within the Intensive Care Unit. This was used as her *NextJob* element.

Louise had a rural background though her university training, and placements were all completed in urban areas. Her rural intentions were based around accompanying her medical student partner to his year-long rural placement.

Because I am originally from the country and would like to go back and I think it would be good experience working in a wide variety of areas. Louise0.180

Looking at Louise's grid, it appears that she construes proximity to significant others as influential in work location choice. The construct she developed first was:

Motivated to be close to family/important others [compared to] Doesn't matter if you are away from family/important others. Louise1.216

In her *Current* position Louise was separated from her immediate family but close to her partner. Recognising the tension that frequently exists between the job of choice and family location, Louise rated her *Ideal* midway between the construct poles. Interestingly, her *SuccessfulRemote* had established his family and a private practice in a small RA4 town, and therefore from Louise's perspective he did not have to choose between proximity to work and family. In comparison, her *NoviceRemote* was separated from his family because of the job, but had no intention of staying long-term in a rural or remote position. Louise believed he would prioritise family by returning to an urban location as soon as he had sufficient expertise to win a position there.

He only wants to stay there for a short period of time so that he can get the experience and then come back' [to be closer to family] Louise1.244

Louise reported that her current graduate position provided a breadth, or variety, of patient presentations which was facilitating rapid development of professional expertise. So, while also construing that rural or remote experience provides generalist experience that accelerates expertise (*You have different patients through the day, like neuro, paed, outpatients.'* Louise3.288), this was not an inducement for her to work in remote.

Isolation appeared an important issue for Louise. She construed both *SuccessfulRemote* and *NoviceRemote* as more isolated than *Ideal*. This isolation encompassed absence of same-profession, multi-disciplinary and medical teams. Additionally, she intimated that lack of access to other professionals can impact patient care negatively. She appeared to view the patient care in large hospitals as better able to meet patient need because of the team approach:

There are just more meetings with other allied health to makes sure that things are going smoothly and make sure that everyone is on the same page with what goals are set for the patient. Louise8.589

Louise rated the *remote* element's opportunities to specialise as limited and further indicated her own preference to specialise. The appeal of specialised positions appeared to be higher status.

When you say you are working in ICU they say, 'Oh, wow.' Especially medical doctors hold you in high regard. Louise7.529

She elaborated on the limited opportunities for the *remote* elements to specialise when she described her understanding of how care is provided in remote.

The difference with the SuccessfulRemote and the hospital person is that in the remote setting there are not, there is not as many challenging patients or unstable patients ... They get sent off to [city] quite quickly to an ICU or High Dependency unit because there is no ICU or High Dependency unit [in remote]. Louise7.497

She felt that this would mean that an AH professional seeking to work in a setting such as an Intensive Care Unit would not consider applying for a remote position because career opportunities would be too limited.

In summary, the distance between Louise's *Ideal* and *SuccessfulRemote* elements can be understood through examination of her constructs. While Louise expressed intent to work in rural or remote, her motivation was to remain with her partner, rather than a preference for the type of work she construed as available there. Further, the career options in urban areas appealed to her, and she did not construe these as available in remote although she acknowledged the clinical variety and learning opportunities in remote areas. Overall, it appeared as if Louise was only making a short-term remote commitment and did not have a strong identification with remote. Therefore, her longer-term retention may likely depend on her partner's career plans and whether she finds that working as a remote AH professional provides unanticipated benefits and unexpected career satisfaction.

Steve was an experienced remote professional in semi-retirement. While he construed his *Current* and *Ideal* as identical ($D_{xy}=0.0$), he had nearly the largest distance ($D_{xy} = 0.59$) between *Ideal* and *SuccessfulRemote*. During the interview, Steve spoke passionately about

working in remote and advocating for the needs of residents in remote areas. Despite the large distance between *Ideal* and *SuccessfulRemote*, he did appear to strongly identify as a remote AH professional. He emphasised his personal strength in creative approaches to remote work but believed he lacked high-level organisational skills and task completion. His construct ratings reflected key differences between *Ideal* and *SuccessfulRemote*, including preference for influencing big-picture system issues and focussing on creative solutions. He commented that these characteristics were different from his *SuccessfulRemote* element whom he described as:

He had an army background. He was very organised, very committed. He had a routine, it was always followed and he was just good at what he did. He didn't work in a public health role but he had respect for his patients. Steve0.82

Thus, Steve did not construe his *SuccessfulRemote* as wrong or ineffective compared with *Ideal*; rather, the distance between the two elements for him represents difference. This idea of someone else's success looking different from personal success was also echoed by Rhys. His personal values of relationships, teamwork and cultural considerations construed as integral for *Ideal* were not values he construed his *SuccessfulRemote* as holding.

He doesn't value the relationship, I know he doesn't ... He sees a lot of patients and as a result he doesn't take the time to get to know them ... He is very process-driven. 'Got to do this. Right, I'm done. Get out. Now, who's next?' Having said that, he is a wonderful clinician. He is really good at what he does – like people get better. Rhys2.111

In summary, most remote-based and remote-intention participants had only small distances between their *Ideal* and *SuccessfulRemote*, suggesting an identification with remote work and providing a hopeful indicator for retention and recruitment. However, Louise's story sounds a cautionary note that remote intentions may not indicate a long-term philosophical commitment to remote but rather an obligation to be fulfilled or the influence of life stages. Those remote participants with a larger distance between *SuccessfulRemote* and *Ideal* actually qualified their construing as indicating difference rather than judgement. Teagan and Shannon, the NoviceUrbans with no remote intention and with most distance between *SuccessfulRemote* and *Ideal*, lend weight to the notion that construing these elements very differently indicates less likelihood of successful recruitment to remote and suggests little or no identification with the remote workforce.

7.1.4 The distance between *NextJob* and *Ideal*: Expectations

Given that most people will change work positions, successful recruitment depends on offering a position at a time that a suitably-qualified individual is considering a change. The double-scaled Euclidean distance between the elements, *Next job* and *Ideal*, were calculated across the sample to see whether participants anticipated their next job would approximate their *Ideal*.

This could be thought of as the expectations that a participant had about the match between their *Ideal* and *Next job*.

Figure 7-4 plots the distances across the sample between *Next job* and *Ideal*. Remembering that zero indicates maximal similarity and one indicates maximal difference between the elements, it can be seen that most participants had expectations that their *Next job* would be quite closely aligned with their *Ideal*. By implication, then, their *Next job* would also offer increased job satisfaction compared with their *Current*. If the *Ideal* is in a remote area and the *Next job* is more closely approximating the *Ideal*, then potentially recruitment and retention in remote areas for those individuals are more likely. This could suggest the possibility that a remote AH professional may be retained longer in remote areas if there are alternative positions available that offer something new – a career direction, a new challenge, possibility for development of new expertise or even private practice opportunities (O'Toole & Schoo, 2010). In time, increased retention could beneficially increase the critical mass of AH professionals providing services and living in remote areas.

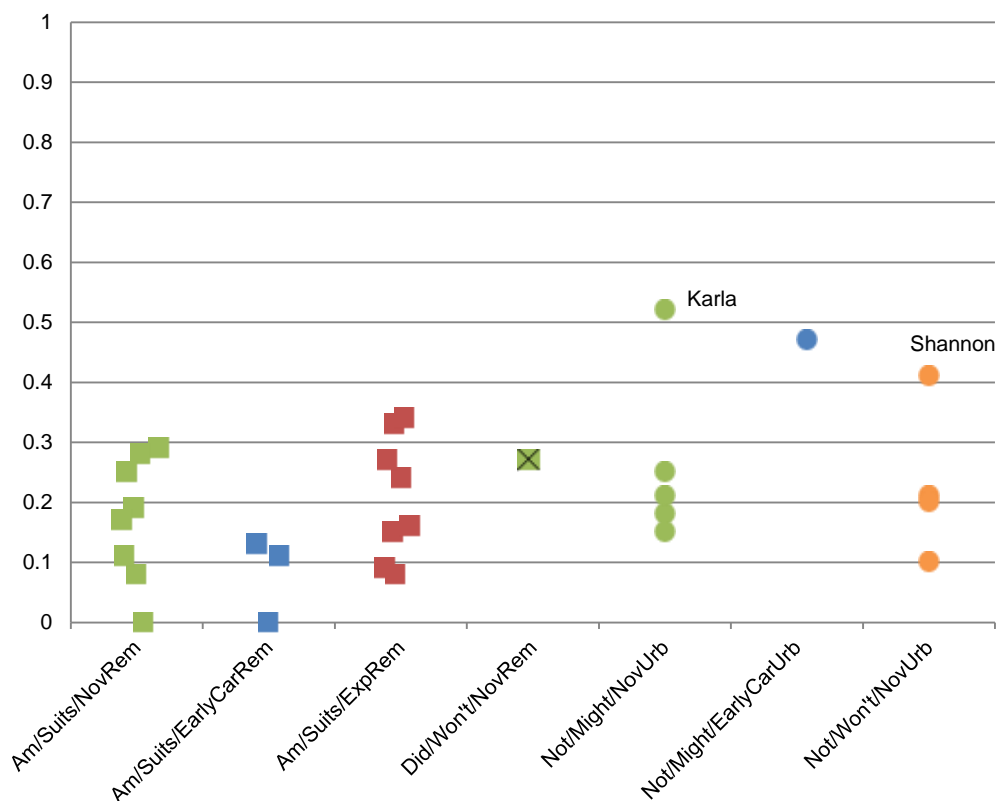


Figure 7-4: Double-scaled Euclidean distance between *Next job* and *Ideal* elements across the sample³⁰

³⁰ The four participants who did not include the *Next job* element are omitted from the figure.

As seen in the figure, some participants still construed a gap between their *Next job* and *Ideal*. While reasons for this gap were not explored in the interviews, there are several possible explanations. Both Karla and Shannon, urban novices working on contracts, were unclear about their *Next job* because they felt they would have to take whatever was available. This means that they were not yet on an established career path *per se*, but rather seeking to remain in a geographical location or specific health sector. They did not appear to have choice about the positions they took. Potentially, this means that they may also have recognised that career paths can develop in stages and that prioritising certain types of experience may mean giving up on other choices.

Overall, this figure demonstrates that most participants had high hopes that their *Next job* would be close to *Ideal*. The exceptions could be realists who accept that stepping stones may be required to get to *Ideal*.

In summary, this section used double-scaled Euclidean distances to examine the relationships between pairs of elements. This provided a picture of the sample's construing of remote work, particularly in regard to their job satisfaction, the alignment between remote and their current work, their identification with remote work, and their expectations about their future work.

The key findings were that most participants were satisfied in their work (comparison of *Current* with *Ideal*) which is positive for retention regardless of location. Dissatisfaction seen in remote novices stemmed from a lack of support and perceived lack of value of their roles. Most remote participants construed similarities, an alignment, between their *Current* and *SuccessfulRemote*. This implies that they view themselves as successful which in turn may contribute positively to their retention. Most of the sample construed their *Ideal* as like the *SuccessfulRemote*, suggesting an identification with remote work which could be positive for retention and recruitment provided their life stage and circumstances were favourable. Most participants construed their *Next job* to be more like their *Ideal* which again could contribute to recruitment and retention success in remote areas if multiple AH positions were available. This section has contributed new information about how individuals construe their work, their career path and the work of AH professionals in remote areas, providing evidence for recruitment and/or retention policies. The second half of this chapter will now focus on case studies.

7.2 Participant case studies

The four participants presented will illustrate the relationships among elements, constructs and ratings. By considering exemplar individuals, the reader will better understand the construing of the sample about working in remote. In turn, this understanding will assist in developing the final summing up and recommendations from this study.

The voices of the participants selected – Ben, Teagan, Kylie and Nicole – have been heard in the previous section and chapters but have been selected for a more complete description because each belongs to a different subset in the sample. In this sense, they can be said to represent the diverse groups in the AH workforce. As in other sections, no reference is made to their professions in order to protect their identities. However, each comes from a different profession. There is a social worker, a dietitian, a speech pathologist and an occupational therapist.

Three (Ben, Teagan and Kylie) are novice AH professionals employed in their first professional positions after graduation. Two are working in urban areas, although one expresses career plans to work remotely, and the third is working in a remote setting. An experienced AH professional, Nicole also features in this section. She has an extensive history of working and living in remote areas.

Each participant will be described using their grid interview, relevant work history and demographic detail. A plot, the singular value decomposition (SVD)³¹ plot derived from their repertory grid interview data, will be presented and explained. The SVD plot has a long history of use in repertory grid analysis because of its ability to account for both elements and constructs (Fransella et al., 2004). In these case studies, the SVD plot will clearly demonstrate how each participant construes working in remote. Interview quotes will provide further evidence to corroborate or deny the findings of the SVD plot. Together, the data of these case study participants provide insight into how they construe themselves and their peers, particularly about working in remote areas.

As detailed in the methods, SVD is a statistical data reduction process that accounts for and simultaneously displays the data from a repertory grid interview, i.e. the elements, constructs and ratings (Bell, 2004; Grice, 2002). The SVD plot shows the distribution of elements across four quadrants relative to the ratings given to each construct and centred on the rating scale midpoint (i.e. 3). Marked on the plot with a red dot, elements that are closer together are more alike, while those at greater distances from each other are less alike (Leach et al., 2001).

Constructs are shown on the SVD plot as vectors, straight lines intersecting at the junction of the horizontal and vertical axes. Both the length and angle of the construct's vector can be interpreted (Jankowicz, 2004). Increasing length indicates greater variance (i.e. its strength), while very short vectors are typically not interpreted because they represent less variance (Leach et al., 2001), i.e. the ratings for the construct did not discriminate between the elements. The angle between a construct vector in relation to other constructs indicates correlations

³¹ For exemplar Singular Value Decomposition plots see Figures 3.7; and Figures 7-5 to 7-8

between the ratings for the elements on those constructs, with smaller angles denoting more similar ratings (Jankowicz, 2004). The construct vectors are labelled in blue around the outside of the plot. The positions of the elements relative to the constructs indicate the degree of influence of the construct on the element (Grice, 2002)

7.2.1 Ben: Not/Might/NoviceUrban in a holding pattern

Ben recently completed a graduate-entry AH professional degree at a regional university as a mature-aged student. He had a previous undergraduate degree in psychology and a career in the hospitality industry. Most of his life was spent in urban areas, while his partner's childhood was spent in rural. Ben indicated that his decisions about work location were primarily influenced by personal rather than professional or organisational factors. At the time of his interview he was living and working in a capital city because of personal reasons (partner's career). However, he stated an intention to work in a remote area as soon as possible. He predicted that he would remain in urban areas for 1-2 years.

Ben's TCI³² scores, presented in Table 7-3, show that his levels are all within a standard deviation from the Strand 1 sample mean, i.e. he is 'like' the sample (Campbell et al., 2013). Further, they also show his low Harm Avoidance compared with the average population. Potentially, his low Harm Avoidance combined with his high Self-directedness has created a low anxiety/high goal-achieving approach that means he is comfortable with moving away from known urban work contexts to more challenging remote situations.

³² Temperament and Character Inventory results from Strand 1 data

Table 7-3: Ben's Temperament and Character Inventory scores compared with population rank and sample mean

Trait	Ben's Score	Ben's score compared with Population rank*	Strand 1 Sample Mean (SD)# (n=561)
Novelty Seeking	51	Average	55.55 (8.39)
Harm Avoidance	44	Low	54.19 (11.95)
Reward Dependence	71	Very high	71.84 (9.58)
Persistence	79	Very high	72.36 (9.50)
Self-directedness	82	Very high	77.38 (9.91)
Cooperativeness	80	Very high	83.35 (7.31)
Self-transcendence	54	Average	44.96 (11.08)

*Population rank= Ranking of mean score against TCI normative percentile rankings for population norms (Cloninger, 1993); Very low=0-16.7%; Low=17-33%; Average=34-66.7%; High=67-83.3%; Very high=84-100%. #See Table 4.3

Ben's plan to work in a remote location appeared both sincere and likely to eventuate. Prior to his AH training he had spent much time living overseas, including in the developing world, where he found satisfaction in *'helping people'* and *'working more with people who don't have as much to begin with'* Ben6.365. At university this developed into an interest in working with Indigenous people. He had actioned this interest by going *'out of my way to arrange placements that were in rural and remote'* Ben0.33, completing several short placements in remote areas. He categorised his views on working remotely as *'not working remotely but might work there sometime. I think it would suit me'*. Additionally, during his interview he commented, *'I relate really well to the types of people living out in rural and remote areas.'* Ben1.88

During his one and a half hour interview Ben developed six constructs and rated all twelve elements. He took a reflective, considered approach. Table 7-4 provides detail on Ben's elements.

Table 7-4: Element descriptions for Ben

Element	Description
<i>Current*</i>	Major urban hospital
<i>Ideal*</i>	Aspirations and hopes for Ideal work
<i>Previous job*</i>	Public health position in a regional area
<i>Hospital job*</i>	Very small regional hospital and satellite clinics
<i>SuccessfulRemote</i>	Mentor

Element	Description
<i>NoviceRemote</i>	Different profession
<i>Urban community health</i>	Urban professional working for a non-government organisation
<i>Private practitioner</i>	Private practitioner working in a private hospital
<i>HospitalOther</i>	Metropolitan-hospital-based but with responsibilities for managing patients both as in- and out-patients
<i>Next job*</i>	Regional location
<i>Role model</i>	Senior urban professional
<i>Position not liked*</i>	Aged care

*Self elements

Ben's SVD plot (Figure 7-5) shows a two-dimensional depiction of the relationships between each of the elements, his constructs and the ratings in his grid. The elements, indicated with a label and a red dot, that are close together are construed by Ben as being more alike than elements which are further apart. Ben's constructs (in blue) are around the exterior of the plot.

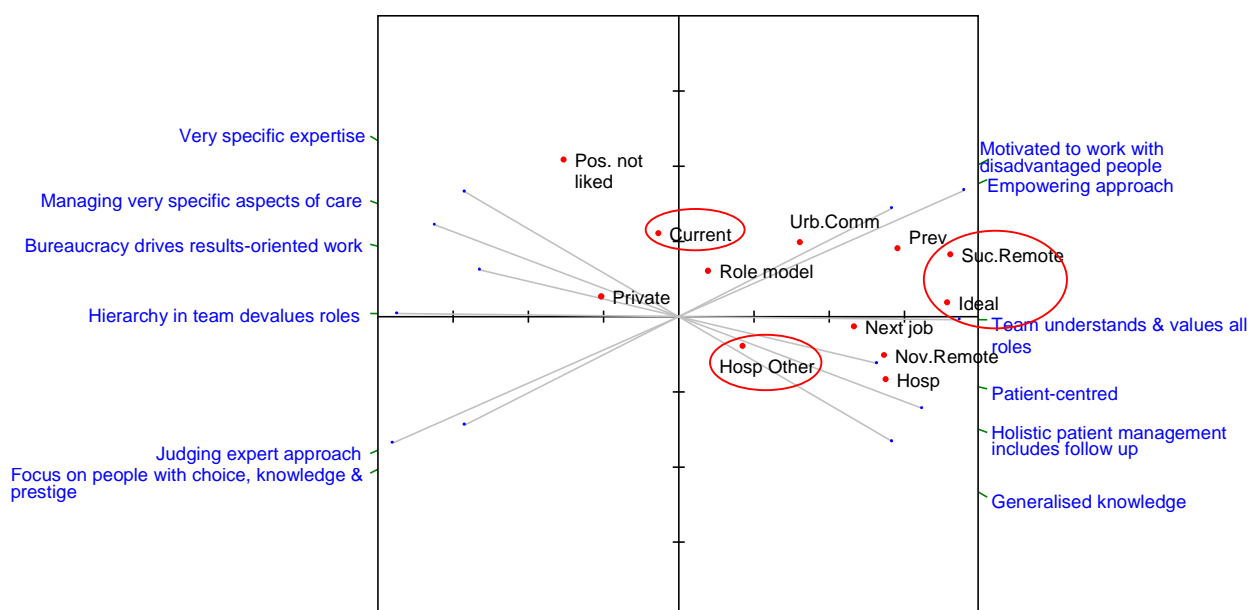


Figure 7-5: Singular value decomposition (scale centred) plot for Ben

As can be seen from the plot, Ben's *Ideal* lies in the same quadrant as his *SuccessfulRemote*, but both are at a distance from his *Current* position. The large distance between *Ideal* and *Current* could indicate some dissatisfaction with his *Current*. A number of facts support this contention: he expressly stated a desire to work remotely; he intended remaining urban only for a limited period due to personal need (partner's work); and he intentionally organised remote student placements. Additionally, the element, *Previous*, is positioned relatively close to *Ideal*

and *SuccessfulRemote*. His *Previous* position was in a regional area working with Indigenous people using a public health approach and therefore appears aligned with his interest in remote health.

The constructs lying closest to Ben's *Ideal* include being patient-centred, holistic and empowering in approach, motivation to work with disadvantaged people, and positions where the team understands and values all roles. Interestingly, Ben's *Hospital-self* element, when he was working as a student in a very small regional hospital with satellite clinics, also lies close to these constructs.

Ben was reflective but passionate about motivation. In describing his construct on motivation about working with disadvantaged people, he said:

[Being] motivated to work with economically and geographically disadvantaged people; people with hardships who don't necessarily have a lot of choice or knowledge – the service is needed vitally and often underfunded [compared with] motivated to work in a job where people already have a lot of advantage, for example in sports medicine, or cultural similarities ... people who have choice and knowledge – the service is a luxury, may have prestige and is often financially more viable. Ben11.443

Interestingly, in rating this construct on motivation, Ben construed most elements, most of the AH professionals in his grid, as concerned with disadvantage. In particular, he rated *SuccessfulRemote* as highly motivated to work with people who are disadvantaged. In contrast, the *Private practitioner* was not rated highly on this construct; rather, they were construed as providing what Ben considered non-essential or even luxury services. Further, he construed the *Private practitioner* as having technical expertise and knowledge but providing services that were results-oriented, with a tendency to be prescriptive and judgemental of non-compliant patients.

Further evidence supporting Ben's contention that he intends to become a remote AH professional is seen in the positioning on the plot of his *NextJob* element. It is close to his *Ideal* and between the *NoviceRemote* and the *SuccessfulRemote*.

In developing his construct around a holistic approach, Ben gave an example to elaborate on what he meant:

When I was doing my work in [remote] there was a lot more team engagement, multi-disciplinary team engagement. With one particular patient I am thinking of, I did a home visit. I also saw them on the ward. There was more time to call them afterwards. So I guess more holistic in the sense that my role was a lot larger, more broad than what it is at the moment in my city job, where I might pass [the patient] on to somebody else and they will take on their care; whereas I was more involved with the patient for the duration of their treatment. Ben1.55

Noticeably, Ben's construing of the *Hospital* elements included holistic patient management and follow-up. This is in contrast to the way many of the remote participants construed their *Hospital/Other*, where medical decision-making dominated and there was a narrow focus on the illness. His construing appears to be specifically related to the particular position occupied by this hospital-based professional. Ben described the work model as following patients between outpatients and inpatients.

She works in a paediatric area and she has got a lot of follow-up and she continues to see a lot of her patients over a period of time. She doesn't really do any of that handover and she will manage everything about them and speak with the families. Ben1.96

To summarise Ben's SVD plot, he construed his *Current* urban-based hospital position quite differently from, and with less satisfaction than, how he construes *remote* work. The picture presented in the plot supports Ben's contention that he would like to work in a remote area at some near future point, given the close proximity of his *NextJob* to both the *NoviceRemote* and *SuccessfulRemote* elements. The constructs developed by Ben and their positioning on the SVD plot near the remote elements align with the content analysis of how the sample construed remote workplaces and AH professionals.

7.2.2 Teagan: Not/Won't/NoviceUrban contentedness

At the time she was interviewed, Teagan had two years of experience. She described herself as 'fortunate' for securing a position in a major hospital immediately after graduation. Winning such a position had been part of her five-year plan. Teagan had undertaken her professional training through a graduate-entry Master's program. During her training she supported herself by working as a carer in disability and with inner-city refugee youth. She believed her career decisions about work location were influenced by professional factors more than by personal factors.

Although both she and her partner grew up rurally she categorised herself as '*not interested in working remotely – it wouldn't suit me*'. She had not completed any rural or remote placements during her training, and her degree was from a large urban university. While she had never worked in rural or remote areas, she did grow up in a small rural town (RA2)³³ about two hours away from a capital city.

Table 7-5 shows Teagan's TCI scores which are similar to the Strand 1 sample. However, her Harm Avoidance, although within one standard deviation of the sample mean, was in the Very high group compared with population norms. Higher Harm Avoidance is associated with

³³ RA2 refers to inner regional areas using the Australian Standard Geographical Classification of Remoteness Areas (Australian Institute of Health and Welfare, 2004).

increased pessimism and anxiety and decreased optimism and confidence. This trait level may be influencing Teagan's decision to remain urban.

Table 7-5: Teagan's Temperament and Character Inventory scores compared with population rank and sample mean

Trait	Teagan's score	Teagan's score compared with Population rank*	Strand 1 sample mean (SD)# (n=561)
Novelty Seeking	57	High	55.55 (8.39)
Harm Avoidance	65	Very high	54.19 (11.95)
Reward Dependence	77	Very high	71.84 (9.58)
Persistence	82	Very high	72.36 (9.50)
Self-directedness	73	Very high	77.38 (9.91)
Cooperativeness	85	Very high	83.35 (7.31)
Self-transcendence	53	Average	44.96 (11.08)

*Population rank= Ranking of mean score against TCI normative percentile rankings for population norms (Cloninger, 1993); Very low=0-16.7%; Low=17-33%; Average=34-66.7%; High=67-83.3%; Very high=84-100%.

#See Table 4.3

During the hour and a half long interview, Teagan developed 12 constructs and rated all 12 elements. Her elements are shown in Table 7-6. Teagan did not have personal knowledge of either a *SuccessfulRemote* or *NoviceRemote*. As per the methodology (Fransella et al., 2004), if an element is not personally known, a generic professional was used; so she located her *Remote* elements in Alice Springs.

Table 7-6: Element descriptions for Teagan

Element	Description
<i>Current*</i>	Major urban hospital in a stroke unit
<i>Ideal*</i>	Aspirations and hopes for Ideal work
<i>Previous job*</i>	Non-government organisation working with a minority culture
<i>Hospital job self</i>	Major urban hospital on a general medical ward
<i>SuccessfulRemote</i>	Experienced professional based in Alice Springs
<i>NoviceRemote</i>	Novice professional based in Alice Springs
<i>Urban community health</i>	Colleague from a previous urban community sector workplace
<i>Private practitioner</i>	Urban-based
<i>Hospital/Other</i>	Major urban hospital
<i>NextJob*</i>	Service improvement and management-type role
<i>Role model</i>	Urban-based government-employed

Element	Description
<i>Position not liked*</i>	Child Protection

*Self elements

Teagan's SVD plot is seen in Figure 7-6. Once again, elements (shown by the label and a red dot) that are close together are construed by Teagan as being more alike than elements which are far apart. Teagan's constructs (in blue) are aligned around the exterior of the plot.

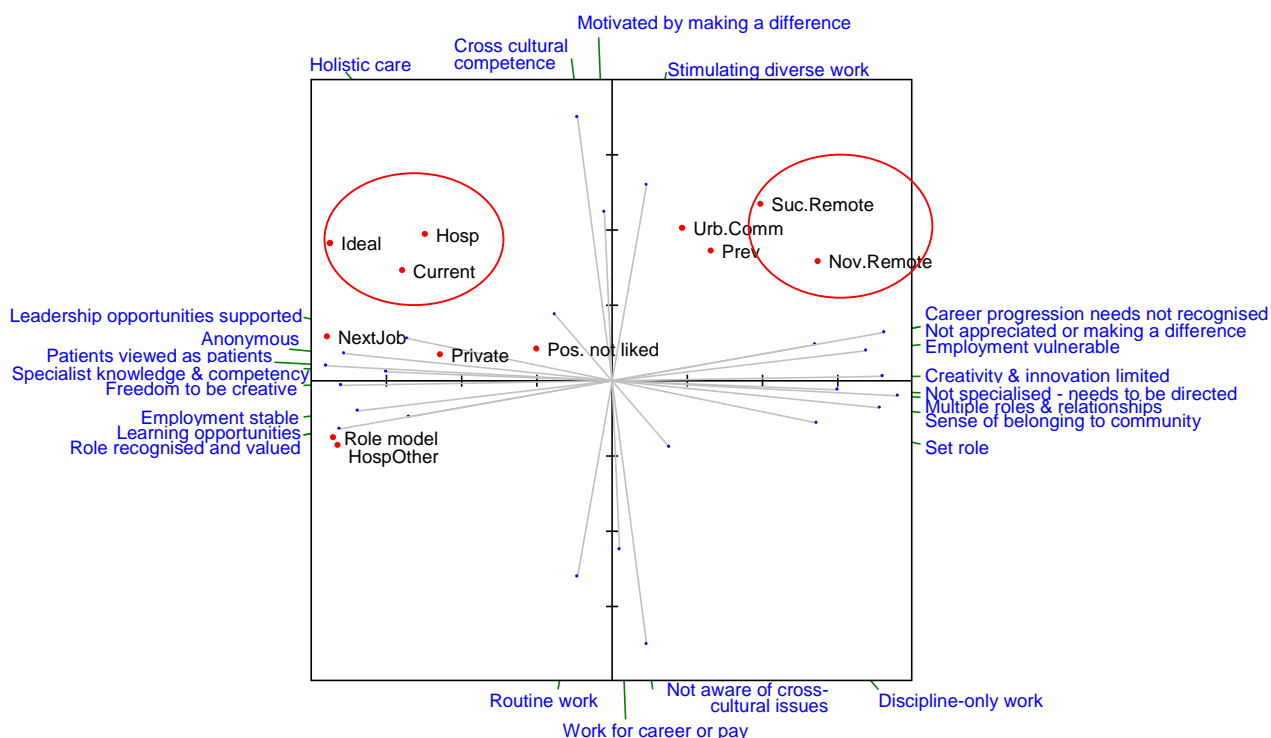


Figure 7-6: Singular value decomposition (scale centred) plot for Teagan

As can be seen from the plot, Teagan's *Current* and *Ideal* lie close together, indicating that Teagan is quite satisfied. She confirmed this during her interview. Noticeably, her *Hospital-self* and intended *NextJob* also lie in relatively close proximity, demonstrating congruence between her past career path and her hopes for her future.

The cluster of elements that appear to suit Teagan are characterised by constructs that include viewing patients as patients, rather than having multiple relationships with them, as would occur in a small community. This view also provided Teagan anonymity in her *Current*, in contrast with her *Previous* job where she worked within a minority culture community and was readily identifiable because of the small size of that community. In developing these constructs, Teagan described the difference in these words:

[In remote workplaces you] feel a sense of belonging to the community because you live there and therefore you know the context of your patients/clients [compared with my current work where] patients are viewed as patients or clients rather than as community members. You don't know their context because of the size. And everyone is anonymous or not known ... So you see the patient, not your next door neighbour, or someone that you know and their history and all that sort of stuff. Teagan11.553

Additionally, she appears to value holding specialist knowledge and competency coupled with a workplace that supports learning opportunities and recognises and values the role of the AH professional. Teagan's SVD plot demonstrates her perception that AH professionals working in remote areas do not get recognition for their work. She said that they would be feeling that:

There is no real value placed on your input. It's not appreciated. Teagan6.367

In contrast to her own urban career choices, Teagan's ratings clustered the *Novice* and *SuccessfulRemote* professionals close to each other, indicating similarity between the two, but far away from her *Current* and *Ideal*. She particularly believed these positions to be lacking in career progression and recognition of career progression needs. Her comments on the *remote* element's ability to manage career progression through professional development plans were that:

You are being directed at what it is that you need to learn and after that, that is sufficient and it is not really looking at you and your needs, and not supporting progression really. Teagan7.411

On the positive side, she views the work of her *remote* elements as stimulating and diverse and utilising a range of skills and approaches. In contrast to her earlier construing that *remote* elements do not get recognition from their organisation or peers for their work, she felt that these AH professionals know they are making a difference to their patients. She construed this as a motivating influence in remote, compared with AH professionals in other areas who might be motivated by status or income.

[Being] motivated by the impact that you can have on someone that you are working with – that you can make a difference [rather than] feeling that your work doesn't make a difference and therefore motivated by something else, for example by career path/pay, et cetera. Teagan 10.512

The closeness of certain elements and the distances from others, combined with the constructs aligned with those elements, provide insight into Teagan's construing of the various AH professional work roles, including her *Current*, *Ideal* and *Remote*. Content in her current urban role and focussed on her career plans, Teagan appears unlikely to take up work in a rural or remote area.

Given that Teagan rated professional factors ahead of personal factors as influencing her work location, the professional or workplace factors in her constructs are likely to be major

influencers towards or away from remote area employment. The constructs included vulnerable employment, career progression and the value of the role. Teagan would be unlikely to think about working remotely without surety that these issues were no longer problematic. Certainty and reassurance may assist in offsetting her high levels of Harm Avoidance. Additionally, Teagan would require support or training of some kind that could change her comfort levels with patient relationships and shift her desire for anonymity to one where she was comfortable with being known in a community.

7.2.3 Kylie: Am/Suits/NoviceRemote satisfied

Kylie had worked in her current RA5 position for a little less than two years. While her position was hospital-based, the service covered a very large geographical area. Most of Kylie's travel involved day trips to towns up to 300 kilometres away, rather than overnight stays. She commented that her *Current* position was the longest position she had held and that she still liked it. However, in keeping with the Generation Y stereotype and research findings about reduced organisational loyalty (Twenge, Campbell, Hoffman, & Lance, 2010), Kylie did not see herself remaining in her position for much longer, although she was uncertain where she would go next. She categorised herself as suited to remote work and believed that personal factors were more important than professional factors in remaining in her current position.

With three years of experience before taking her current remote position, Kylie had worked in an RA1 area where she had several jobs including acute hospital- and community-based rehabilitation, and a six-month stint in a rural coastal town. She had a rural background and was single with no dependants. Her AH degree was from an urban university although she completed one short rural student placement.

As seen in Table 7-7, all Kylie's scores are within one standard deviation from the Strand 1 sample mean except for Reward Dependence, which was lower than the Strand 1 score. Compared with population ranks she has very high Novelty Seeking (curiosity and desire for new challenges). Despite her high levels of Novelty Seeking, Kylie's *Current* role is the longest she has stayed in one position. It is possible that the scope of work in her previous urban positions became mundane more quickly, compared with remote work. She described her previous working life as:

Yep, I have 6-12 months of this; time to move onto something else. Kylie1.161

In combination with her high Novelty Seeking levels, Kylie's lower Reward Dependence (compared with Strand 1 sample) may have allowed her to move onto a new job without feeling that she had deserted previous colleagues and patients.

Table 7-7: Kylie's Temperament and Character Inventory scores compared with population rank and sample mean

Trait	Kylie's score	Kylie's score compared with Population rank*	Strand 1 Sample Mean (SD)# (n=561)
Novelty Seeking	61	Very high	55.55 (8.39)
Harm Avoidance	54	Average	54.19 (11.95)
Reward Dependence	60	High	71.84 (9.58)
Persistence	67	Very high	72.36 (9.50)
Self-directedness	80	Very high	77.38 (9.91)
Cooperativeness	89	Very high	83.35 (7.31)
Self-transcendence	39	Low	44.96 (11.08)

*Population rank= Ranking of mean score against TCI normative percentile rankings for population norms (Cloninger, 1993); Very low=0-16.7%; Low=17-33%; Average=34-66.7%; High=67-83.3%; Very high=84-100%.

#See Table 4.3

During her repertory grid interview, which took 80 minutes, Kylie generated eight constructs. As shown in Table 7-8, all 12 elements were rated on all constructs except *NextJob*, which was not able to be rated for three constructs because of her uncertainty about it. In keeping with Grice (2002), the midpoint of the scale (i.e. 3) was used to replace the missing ratings.

Table 7-8: Element descriptions for Kylie

Element	Description
<i>Current*</i>	RA5 hospital plus travel for outreach services to region
<i>Ideal*</i>	Aspirations and hopes for Ideal work
<i>Previous job*</i>	Community-based position in RA1 city
<i>Hospital job*</i>	RA1 hospital
<i>SuccessfulRemote</i>	Work colleague
<i>NoviceRemote</i>	Work colleague
<i>Urban community health</i>	Urban-based
<i>Private practitioner</i>	Urban-based
<i>HospitalOther</i>	Urban-based
<i>Next job*</i>	Uncertain, and therefore 3 constructs not rated
<i>Role model</i>	Rural-based
<i>Position not liked*</i>	Transitional care

*Self elements

Both her elements and constructs are shown in the SVD plot in Figure 7-7. The construct vectors are within the four quadrants, with the constructs printed in blue around the outside of the plot. The elements are within the four quadrants of the plot and marked with a red dot.

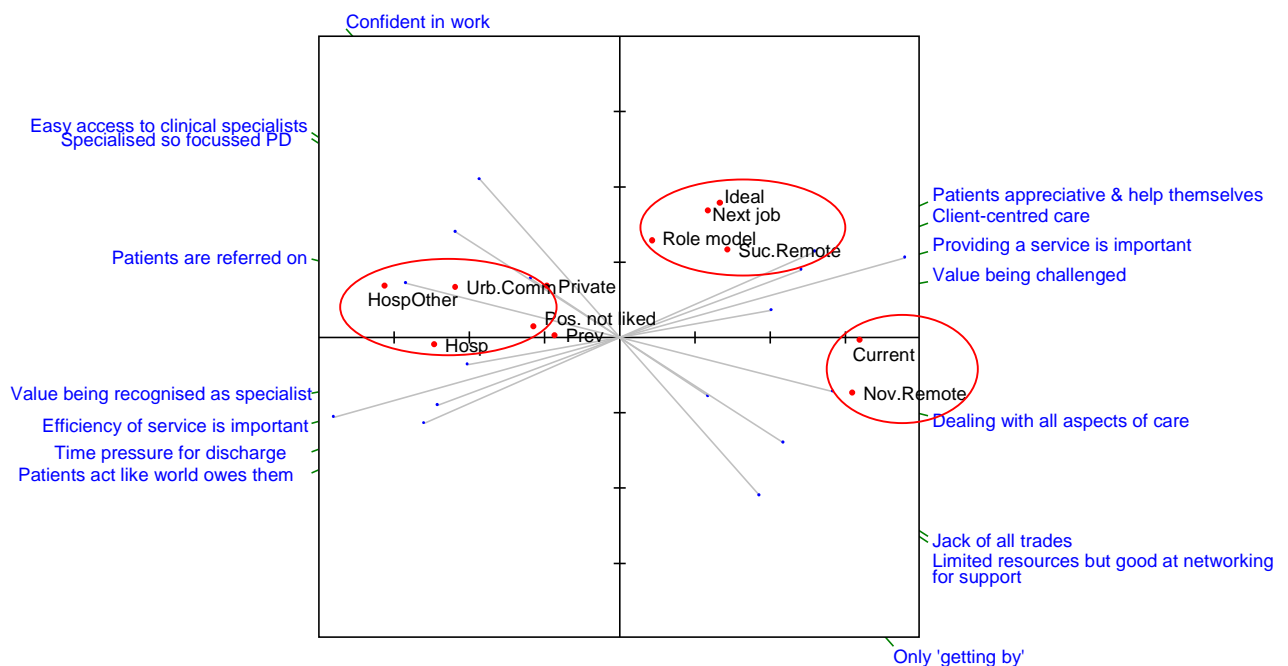


Figure 7-7: Singular value decomposition (scale centred) plot for Kylie

Elements located in closer proximity to each other in the plot were construed as more alike. Three groups of elements can be seen in Kylie’s plot. One group located in the middle of the upper right quadrant comprises two *Self* and two other elements: *Ideal* and *Next job*, *Role model*, and *SuccessfulRemote*. The second group of elements includes Kylie in her *Current* position, and *NoviceRemote*. These elements are on the same side of the SVD plot as her *Ideal*. Finally, the third group comprising only urban-based elements is located on the left-hand side of the plot.

While Kylie viewed herself most like her *NoviceRemote*, there were also commonalities with *Ideal* and *SuccessfulRemote*. Her constructs revealed what she valued about working in remote areas. For Kylie, remote means working with a client-centred team approach, rather than under time pressure to cope with medically-dominated discharge decisions.

When we are doing hospital work here, we don't have full hospitals whereas soon as you get someone out you get another person in. So you can do a good discharge, all the planning that you need to do, all the equipment. You don't have to cut corners. You are not running around trying to do 20 patients a day ... You are not time limited in approach. Working in the [urban] hospital you felt like you only had 5 minutes on each client. The doctor is on your case to get them out; but here they are happy for you, I guess more supported by medical staff and

nursing staff; I guess it is more client-centred, getting the best client discharge, not simply getting them out. Kylie1.45

Additionally, Kylie valued being challenged in her work, as a consequence of the generalised, broad nature of the conditions that her clients presented with. She had to deal with all aspects of care and was not able to refer patients onto more specialised local professionals, although she recognised the importance of having a network for professional support.

Sometimes you do have to ... ring someone who is an expert in the area to find out what we need or what the best treatment strategy is. Kylie2.88

Kylie talked about her professional confidence wavering at times, particularly when her work was on show, such as when supervising students.

I hope they don't ask me too many questions about this. Kylie4.161

This construct was seen in Figure 7-7 as 'Confidence/Only just getting by'. The closer proximity of this construct to *Current* compared with being further away from *SuccessfulRemote*, *Ideal* and *HospitalOther* indicates the relative influence of professional confidence in Kylie's thinking. In other words, Kylie construes her own confidence as weaker than many of the other elements, except perhaps for *NoviceRemote*. Access to professional development may be one way to enhance Kylie's confidence. Decreasing confidence presents a risk to the organisation that the AH professional may seek alternative employment promising increased support and development.

Overall, there are many aspects of remote work that Kylie appreciates and has found rewarding, and these appear to have contributed to her retention. In keeping with her high Novelty Seeking score, Kylie intended to move on some time soon. However, her ongoing retention in a remote area may be because the model of care resonates with her client care philosophy and preferred team approach to work. Kylie's prior urban experience may have bolstered her confidence in her own professional knowledge and facilitated her ability to cope with the generalised and less supported nature of remote work. However, there are indicators that her confidence is wavering, and this potentially could also influence a decision to move to another position offering supported professional development and the opportunity to become specialised.

7.2.4 Nicole: Am/Suits/ExperiencedRemote settled

Nicole participated in the repertory grid interview while sitting on the lounge room floor of her home, breastfeeding her baby. She had been on maternity leave for a few months from her position based in an RA3³⁴ agricultural area. Like most remote and rural AH professional positions, the job required extensive travel within a 3700 square kilometre zone servicing 14 RA4 towns. Provision of inpatient service to the local hospital was only a very small portion of her work. With fourteen years of experience, having settled and been married to a local, Nicole represents every rural or remote community's dream workforce.

Nicole grew up 'in the city' and studied her AH degree at an urban university. Despite her urban background, she completed a rural clinical placement during her training and has spent her entire professional career in rural areas. Following five years in her first job, she had a series of shorter stints in various RA2-4 locations. She spoke of enjoying new situations and new friends, a sense of adventure and starting over.

On reflection, she decided that she had been drawn to rural areas because of factors revolving around people; knowing people, being known and getting involved:

All the jobs I have been in, you form relationships with [sic], the people at work are your friends as well, so you are hanging out outside of work and you are playing sport together. And I find that sort of lifestyle ... not just professionally, but personally as well, fulfilling. Nicole7.307

Nicole had been in her present location for six years and expected to remain there for a long time. She rated personal factors as the most influential in her decision to remain in her current position, followed by organisational and then professional factors. This thinking was echoed in her interview results and underscored by her decision to form permanent rural family commitments. Nicole's TCI trait levels, presented in Table 7-9, show that compared with the Strand 1 sample, her Harm Avoidance is low, while her Reward Dependence and Persistence are high. Like the other participants with low Harm Avoidance, Nicole has likely been less anxious and pessimistic about commencing work in remote areas, while her high Persistence would have contributed to her determination to work through challenges. Further, her higher Reward Dependence potentially contributed to her willingness to settle down once she had significant family responsibilities and community connections.

³⁴ RA3 refers to outer regional areas using the Australian Standard Geographical Classification of Remoteness Areas (Australian Institute of Health and Welfare, 2004)

Table 7-9: Nicole's Temperament and Character Inventory scores compared with population rank and sample mean

Trait	Nicole's Score	Nicole's score compared with Population rank*	Strand 1 Sample Mean (SD)# (n=561)
Novelty Seeking	54	Average	55.55 (8.39)
Harm Avoidance	39	Very low	54.19 (11.95)
Reward Dependence	85	Very high	71.84 (9.58)
Persistence	84	Very high	72.36 (9.50)
Self-directedness	84	Very high	77.38 (9.91)
Cooperativeness	85	Very high	83.35 (7.31)
Self-transcendence	56	High	44.96 (11.08)

*Population rank= Ranking of mean score against TCI normative percentile rankings for population norms (Cloninger, 1993); Very low=0-16.7%; Low=17-33%; Average=34-66.7%; High=67-83.3%; Very high=84-100%.

#See Table 4.3

Nicole's interview was completed over two sessions totalling two and a half hours. She was focussed and thoughtful during the interview, developing 11 constructs and rating these on 11 elements, as shown in Table 7-10. Expecting to remain in her current area and continue in the same job for the foreseeable future, Nicole was unable to picture or rate the *NextJob* element.

Table 7-10: Element descriptions for Nicole

Element	Description
<i>Current job*</i>	Community-based position she occupies when not on maternity leave
<i>Ideal job*</i>	Aspirations and hopes for Ideal work
<i>Previous job*</i>	Rural position in RA3 town
<i>Hospital job*</i>	Student placement
<i>Successful remote</i>	Remote work colleague
<i>Novice remote</i>	Remote work colleague
<i>Urban community health</i>	Urban-based but had worked rurally earlier in career
<i>Private practitioner</i>	Rural-based
<i>HospitalOther</i>	Based on perceptions of working in a tertiary hospital
<i>Next job*</i>	Not rated
<i>Role model</i>	Rural-based
<i>Position not liked*</i>	Aged Care

*Self elements

Nicole's SVD plot is shown in Figure 7-8 below and shows a tight group of elements on the right-hand side of the plot. Close proximity of elements indicates similarity, and therefore it can be seen that Nicole construes these elements as alike. Thus, she construes the *SuccessfulRemote* as quite similar to her *Current* and very like her *Ideal* and *Role model*. The closeness of her *Current* and *Ideal* suggests high job satisfaction.

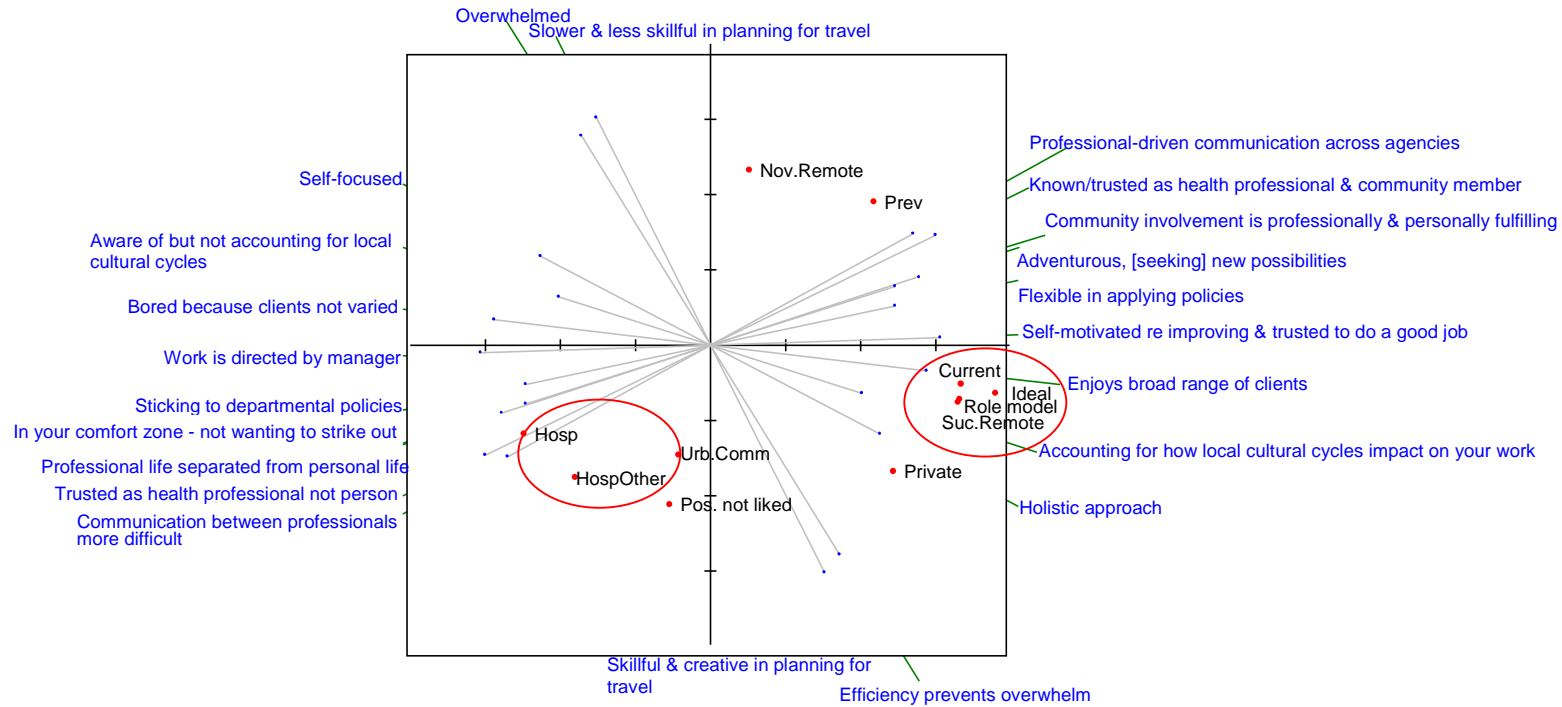


Figure 7-8: Singular value decomposition (scale centred) plot for Nicole

Interestingly, her *NoviceRemote* is at a distance from the group, although still on the right-hand side of the plot. Examining the constructs as shown in the SVD plot helps to interpret this distance. Compared with the *SuccessfulRemote*, *Role model* and *Current*, the *NoviceRemote* is overwhelmed by the demands of the job and travel and not yet confident to use a family-centred approach but rather focusses on therapy processes. Nicole elaborates:

With experience you take into account families and their dynamics and what is priority for them and how therapy fits into their lives and what they expect and how to motivate them. Whereas when you are just working from theories and trying to put that into practice you are probably more focussed on your process of what you are doing rather than what the family are doing or how they are feeling about it. Nicole1.36

The SVD plot also shows that Nicole construes working in rural or remote areas quite differently from working in a tertiary hospital. Her *Hospital* self-element was a student placement she undertook in an urban setting, but because she no longer knew anyone working exclusively in a hospital, the *HospitalOther* represents her construing about that workplace. (As per the methodology (Fransella et al., 2004), an element does not have to be personally known, as long as the participant can report how they construe the role.)

Like Teagan, Nicole's data revealed the power of the repertory grid. Nicole's SVD plot and constructs demonstrate how unlikely it is that she would choose to work in a hospital, because she construes it very differently and rather unsatisfactorily compared with her *Ideal*. In particular, her constructs show that she thinks of *HospitalOther* as being policy-bound, working in a 'comfort-zone' that appears boring to her, and operating in a professional space clearly separated from personal activities. This contrasts markedly with the satisfaction Nicole gains from her community involvement.

Nicole values participating in a rural community. Her constructs reveal that she feels trusted as a professional and known as a person. This appears to be part of her identity. She construes working remotely as being facilitative of opportunities to engage with and be trusted by the whole community. In comparison, her construing of a hospital-based professional is that they remain within their own environment and are 'visited' by the patients. Thus, they are only trusted as a health professional rather than also as a community member.

I had to engage with the community as part of my job, whether it was giving talks and having a presence in the community like being at day care, or being seen down the street, or talking to people in the community, whether it was a teacher or a day-care worker or doctor people knew you, that you were the [AH professional] ... people trusted you. [Compared with the hospital job where] You were pretty much just within those four walls and you had no responsibility to the community, just had responsibility to that client that was in front of you. I think you are probably trusted as a health professional in that [hospital] setting but people don't know you as a person and your integrity. Nicole4.189

This sense of contributing to the community and holding multiple roles facilitated her professional responsibilities, such as communication and referral of patients to other health providers.

Interestingly, she views rural work as providing greater skills development because of the broad range of clients, compared with hospital work where the professional has specialised in an area and subsequently narrowed their skills. Nicole construed the need for generalism as an advantage of rural and remote work, saying:

In the job I am in at the moment I can see very young children, I can see a school-aged child, I can see an adult, I can see an aged care person, whereas just working in aged care would be a lot of the same. Nicole9.246

Another key difference Nicole described between the rural group and the *hospital* elements was the ability to be flexible in applying policies. She rated the *remote* elements as having more discretion than the *hospital* elements in applying policies such as client non-attendance. She believed this facilitated quality patient management.

You know the families to persist with, you know there is a particular reason behind their reticence to engage or you know the child's problem is so significant that it is worth persisting ... You ignore the policy because you feel it is in their best interest to maybe work in a different way. Nicole8.430

In summary, Nicole presents as a satisfied rural-based professional who is committed long-term to her work and community. As both personal and professional reasons contribute to her retention, her SVD plot demonstrates that she does not construe working in a major urban hospital as the position of choice for her.

7.3 Conclusion

This chapter focussed on the elements, i.e. the work roles, in the participant's repertory grids. In doing so, it has described how participants construed themselves as similar to or different from peers working in remote areas. Using two different data reduction techniques, the chapter has argued that overall the sample were satisfied in their jobs and that their self-assessed suitedness to remote work matched their construing about remote workplaces.

In general, participants with remote experience demonstrated alignment between *Current*, *Ideal* and *SuccessfulRemote*. They identified with the remote workforce. Participants generally had expectations that their *Next job* would look like their *Ideal*. Those participants with no intention of working remotely construed their *Ideal* and *Next job* as very different from *Current* and *remote* elements and did not anticipate moving to remote. The *HospitalOther*, located more often in urban areas, was also construed very differently from *remote* elements.

The case studies provided additional insight into how the elements were construed by individuals with different combinations of professional and remote experience, and demonstrated that their construing aligned with both job satisfaction and their decisions about working in remote areas. In particular the job satisfaction observed in the participants working successfully in remote areas is very positive for retention. Further the construing about remote work revealed by Ben, the participant with intent to work remotely is a source of hope for recruitment.

This chapter has added further to our understanding of how AH professionals construe the personality and motivation characteristics that contribute to success at work, in particular in the remote context. Practical application of this information for recruitment and retention policy will be further explored in the final two chapters, Chapters 8 and 9.

Chapter 8

Synthesising the Results for Strands 1 and 2

8 Synthesising the results for Strands 1 and 2

This thesis has presented a unique dataset created *via* a convergent parallel mixed methods design (Creswell, 2014). Its uniqueness lies in three key areas. Firstly, investigation of the personality and motivation traits of remote allied health (AH) professionals to gain a better understanding of recruitment and retention in remote areas is a huge gap area in the literature. Secondly, the well-validated personality measure used in Strand 1, the Temperament and Character Inventory (TCI), builds on emerging evidence about Australian doctors, nurses and health students (Eley & Eley, 2011; Eley et al., 2012; Eley et al., 2009a, 2009b; Jones et al., 2013). Thirdly, the repertory grid technique used in Strand 2 is a powerful data collection tool for gaining complex qualitative and quantitative insights into how individuals construe themselves and others (Jankowicz, 2004; Saúl et al., 2012), as well as their work (e.g. Wilson & Retsas, 1997). As idiographic data, the results from the repertory grids become most useful when nomothetic generalisations or theories about 'similar' individuals (that is, AH professionals) can be suggested (Grice et al., 2006; Karson, 2007). Kelly (1955a) described the usefulness as suggesting a relationship between the 'relevant facts to principles of human behaviour' (p 42). Thus, moving abductively³⁵ between Strands 1 and 2, and between theory and data, to understand how each elucidates the other is critical (Magnani, 2001; Morgan, 2007). Consequently, the synthesis of Strands 1 and 2 will be the focus of this chapter. Bringing both sets of information together to understand the divergence or convergence of the data will strengthen the findings and recommendations that will comprise the final chapter, Chapter 9.

This chapter will begin by combining the quantitative results, the personality trait levels, with repertory grid findings from a selection of participants. This information will inform the discussion of the recruitment and retention of specific groups of AH professionals. This will be followed by discussion that aligns the TCI trait findings with the qualitative repertory grid construct analysis. In keeping with Creswell (2014), because of its convergent parallel mixed methods design, this chapter will include two major tables as joint displays of data to summarise the convergence of the data. Areas of divergence will also be addressed.

8.1 The quantitative findings: Understanding the Temperament and Character Inventory and the repertory grid

The joint display of data shown in Table 8-1 presents the key characteristics of ten participants. These participants contributed to both Strand 1 and 2 and therefore completed the full TCI and the repertory grid interview. A systematic approach was developed to select the participants for this synthesis based on their previously reported attributes, i.e. occupation, age, location and

³⁵As discussed in Chapter 3, the pragmatist approach moves abductively backwards and forwards between theory and data to arrive at new information.

motivation to work in a remote area (See Tables 5.1 to 5.3). A multi-dimensional matrix to evaluate all 34 Strand 2 participants considered the following attributes in order:

- Participants with either least or most Euclidean distance (similarity or dissimilarity respectively) between *Ideal* and *Current* elements in their repertory grid
- Participants with either least or most Euclidean distance (similarity or dissimilarity respectively) between *Ideal* and *SuccessfulRemote* elements in their repertory grid
- Current location of work as remote or urban (ratio of 2:1 to reflect Strand 2 sample)
- Novice or experienced AH professional (ratio of 2:1 to reflect Strand 2 sample)
- Female:male ratio to reflect Strand 2 sample
- Spread of professions to reflect Strand 2 sample
- Self-assessed suitedness to remote work to reflect Strand 2 sample
- Comparison of TCI trait levels with the Strand 1 sample mean for each trait.

After the 10 participants were selected, two more checks were made to ensure that the group was representative of the whole sample of 34. The first compared the TCI trait scores of the selected participants with the mean scores of the Strand 1 participants. In general, it was desirable that the levels across most of the seven TCI dimensions for any individual were within one standard deviation of the mean³⁶ of the Strand 1 participants. This ensured that the participants selected were not markedly different or skewed away from the personality trait scores of the whole Strand 1 sample.

The second check was to examine the TCI levels of the remaining 24 participants to ensure that no combinations of trait levels had been inadvertently excluded. The importance of this step was to account for all the data, irrespective of whether it converged on or diverged from the anticipated or most common findings (Creswell, 2014).

The professions of the ten selected participants included speech pathology, dietetics, occupational therapy, physiotherapy and social work. However, to ensure anonymity the participants are not linked with their professions in the following discussion. Table 8-1 shows the combined Strands 1 and 2 attributes for each of the selected participants.

³⁶ Standard deviation measures the variability of a distribution of scores. Assuming a normal distribution of scores, one standard deviation either side of the mean includes approximately 2/3 (68%) of the scores, while two standard deviations account for approximately 95% of the scores.

Table 8-1: Key characteristics of case study participants

Attribute	Rhys	Kylie	Dimity	Ben	Louise	Nina	Teagan	Faye	Nicole	Ingrid
Experience level	Novice	Novice	Novice	Novice	Novice	Novice	Novice	Experienced	Experienced	Experienced
Self-assessed suitedness to remote	Suited	Suited	Suited	Might be suited	Might be suited	Suited for a while	Not suited	Suited	Suited	Suited
Current work location	Remote	Remote	Remote	Urban	Urban	Urban	Urban	Remote	Remote	Remote
Background	Rural	Rural	Urban	Urban	Rural	Urban	Rural	Rural	Urban	Urban
Partnered (background)	Yes (urban)	No	Yes (urban)	Yes (rural)	Yes (rural)	Yes (rural)	Yes (rural)	Yes (rural)	Yes (rural)	No
Dependants	No	No	No	No	No	No	No	Yes	Yes	No
Temperament and Character Inventory levels (population rank#)										
Novelty Seeking	63 (vH)	61 (vH)	47 (Av)	51 (Av)	44 (L)*	60 (H)	57 (H)	56 (H)	54 (Av)	52 (Av)
Harm Avoidance	36 (vL)*	54 (Av)	74 (vH)*	44 (L)	41 (L)*	41 (L)*	65 (vH)*	73 (vH)*	39 (vL)*	64 (vH)
Reward Dependence	69 (vH)	60 (H)*	63 (vH)	71 (vH)	75 (vH)	84 (vH)*	77 (vH)	83 (vH)*	85 (vH)*	60 (H)*
Persistence	92 (vH)*	67 (vH)	75 (vH)	79 (vH)	89 (vH)*	69 (vH)	82 (vH)	64 (vH)	84 (vH)*	76 (vH)
Self-directedness	86 (vH)	80 (vH)	74 (vH)	82 (vH)	82 (vH)	87 (vH)	73 (vH)	71 (vH)	84 (vH)	59 (H)*
Cooperativeness	86 (vH)	89 (vH)	87 (vH)	80 (vH)	89 (vH)	93 (vH)*	85 (vH)	89 (vH)	85 (vH)	84 (vH)
Self-transcendence	42 (L)	39 (vL)	64 (vH)*	54 (Av)	29 (vL)*	51 (Av)	53 (Av)	50 (Av)	56 (H)	53 (Av)
Double-scaled Euclidean distance between repertory grid elements##										
<i>Current:Ideal</i>	0.13	0.40	0.53	0.46	0.31	0.67	0.25	0.00	0.13	0.49
<i>Current:SuccessfulRemote</i>	0.48	0.32	0.17	0.43	0.59	0.59	0.61	0.12	0.11	0.37
<i>SuccessfulRemote:Ideal</i>	0.54	0.20	0.46	0.14	0.59	0.25	0.65	0.12	0.13	0.19
<i>NextJob:Ideal</i>	0.08	0.25	0.29	0.18	0.15	0.27	0.20	-	-	0.09

Population rank to percentile: Very Low (vL)=0–16.7%; Low (L)=17–33%; Average (Av)=34–66.7%; High (H)=67–83.3%; Very High (vH)=84–100%

*TCI trait levels are within one standard deviation of Strand 1 AH professional sample mean unless marked (Campbell et al., 2013, see Table 4-3)

Distance calculated using double-scaled Euclidean distance where 0 = perfect similarity and 1 = perfect dissimilarity between the two elements being compared. For example, a distance of 0.13 (Rhys) between *Current* and *Ideal* suggests the two elements are construed similarly, compared with a distance of 0.67 (Nina) suggesting *Current* and *Ideal* are construed quite differently from each other.

Out of the ten participants, seven are novice. Note that there is a range of combination of self-assessed suitedness to remote ('fit' with remote) with experience levels. Four of the novices are currently working in urban, with two of these expressing remote intent, one with previous experience in remote but now returned to urban work, and one having no intention to work in remote areas. As described in Section 5.1.3, no urban-experienced AH professionals were included.

The TCI results listed in the table for each participant are compared with both the population rank (Cloninger et al., 1994) and the Strand 1 sample reported in Chapter 4 (Campbell et al., 2013; Campbell, Eley, & McAllister, 2014). In keeping with contemporary applications of trait theory (Cloninger & Zohar, 2011; Kluger, Laidlaw, Kruger, et al., 1999; McCrae & John, 1992), the trait combinations in individuals must be considered because they are crucial for influencing behaviour; for example, high levels of both Cooperativeness and Self-directedness indicate a mature personality, while low levels of this trait combination have been reported for personality disorder (Kluger, Laidlaw, Kruger, et al., 1999).

Overall, the TCI results for these ten participants suggest professionals with a mature personality (Kluger, Laidlaw, Kruger, et al., 1999). In particular, note the high levels of Self-directedness and Cooperativeness which, in combination with Self-transcendence, have been associated with well-being (Cloninger et al., 2011). This observation supports the finding of reasonable job satisfaction (as discussed in Chapter 7 and indicated in Table 8-1 by the distance calculated between *Ideal* and *Current*), where decreasing distance equates with increasing congruence between the *Ideal* and *Current* (Hardin & Donaldson, 2014; Norris & Makhoul-Norris, 1976). For example, the distance for Rhys between *Ideal* and *Current* (Table 8-1; $D_{xy} = 0.13$) indicated he construed *Ideal* very like *Current* and therefore can be said to be satisfied at work. In comparison, Nina and Dimity appear dissatisfied (more than 0.5 distance between their *Ideal* and *Current*), while Ben and Ingrid are somewhat dissatisfied. Potential reasons for these findings will be explored below.

The next few paragraphs will discuss each of the ten individuals in turn, before synthesising the findings and suggesting some patterns seen across the group. As in the Strand 2 results, participants will be grouped by their intention to work in remote, and self-assessed suitedness to remote (Am/Suits; Not/Might; Not/Won't; Did/Won't), as well as by experience (novice; experienced). As pointed out by Zayas and Shoda (2009), it is not possible to predict behaviour on personality traits alone. For each individual, a number of factors may interact and contribute to their successful recruitment and retention in remote areas, including:

- life circumstances including, for example, needs of partner and/or dependants, previous remote experiences and background

- intention about location of work (measured by suitedness to remote; and double-scaled Euclidean distances between *Current/SuccessfulRemote* showing alignment with remote, and *NextJob/Ideal* showing expectations about career path)
- TCI trait levels and combinations of trait levels, with a stronger focus on traits that distinguished between the participants. For example, Novelty Seeking distinguished remote from non-remote AH professionals in Strand 1, and Harm Avoidance distinguished remote from non-remote women in Strand 1.
- Job satisfaction (measured through double-scaled Euclidean distance between *Ideal/Current*)
- Identification with remote (measured through double-scaled Euclidean distance between *Ideal/SuccessfulRemote*).

These factors are all included in Table 8-1 and will be discussed for each individual if they appear influential and show convergence with or divergence from each other. (Findings specific to these participants that have been included in other chapters will be cross-referenced to previous chapters rather than repeated in detail.)

8.1.1 Am/Suits Novice

As a mature-aged novice with a previous urban career, **Rhys** had been based in a remote area for nearly two years and had recently won a more senior position. Travelling large distances to provide AH services to his region was routine. He appeared very satisfied with his new position (see Table 8-1 showing small Euclidean distance between *Ideal/Current*) although, as described in the literature, he observed that novices in remote areas often struggled because of the lack of support (Campbell et al., 2012). He reported being suited to remote work although he appeared to construe the *SuccessfulRemote* quite differently from his *Current* and *Ideal*, with a larger distance between these elements. With the exception of very low Harm Avoidance, his trait levels were all within one standard deviation of the Strand 1 mean, implying that on the whole he is similar to the Strand 1 sample. In particular, his high Novelty Seeking reflected that of the Strand 1 remote AH professionals. Potentially, his positivity towards remote work could result from cumulative influences, including his previous life experience, previous positive remote student experiences, overall mature personality, and high Novelty Seeking (curious outlook that values challenge), combined with a low level of Harm Avoidance (anxiety and pessimism). Reduced anxiety about uncertainty and a relaxed, confident approach would be helpful in managing the travel component of work, as well as assisting in thriving despite limited support. His high Novelty Seeking may also explain his enthusiasm for the new senior position despite his relative inexperience. However, there is the potential, as noted by Hall et al. (2007), that his adventurous attitude may undermine his long-term retention.

Information about **Kylie** was provided in the Strand 2 case study results (See Section 7.2.3). However, it is important to recall that she had urban experience before working in a remote area. Therefore, despite still fitting the 'novice' category, she had a foundation of professional experience and confidence. Further, she appeared only partially satisfied with her *Current*, although the smaller distance between her *Ideal/SuccessfulRemote/NextJob* suggested that she identified with remote. Reduced job satisfaction, combined with high Novelty Seeking (implying the importance of new challenges), could be the impetus for her to seek alternative employment in the near future. Like Rhys, Kylie's high Novelty Seeking might have potentially contributed to her recruitment to remote from urban, but longer term may not support retention. If a position similar to her *SuccessfulRemote* became available, it is possible that Kylie may be open to remaining in remote areas (small distances between *Ideal/SuccessfulRemote/NextJob*).

Although **Dimity** nominated herself as suited to remote work, her average Novelty Seeking and very high Harm Avoidance diverged from sample means for the Strand 1 remote AH professionals. High Harm Avoidance is associated with a pessimistic, fearful approach. Additionally, compared with most of the sample, her job satisfaction was lower (large *Ideal/Current* distance). The distance between *Current* and *SuccessfulRemote* was small, implying that she construed these elements as similar. Given her limited job satisfaction in *Current*, it is possible that Dimity was construing similar challenges in both *Current* and *SuccessfulRemote*. While these findings may appear to be a negative influence for retention, Dimity had worked in an isolated RA5 community for several years at the time of interview and did not have concrete plans for changing jobs. Potentially, her well-being may have been protected by her high levels of Self-directedness, Cooperativeness and Self-transcendence (Cloninger et al., 2011). Additionally, although she reported an urban background, her family had a long history of working with remote communities, and this may have conferred an additional benefit for retention (Keane et al., 2012). Finally, her lower Novelty Seeking may also have supported retention because she was not constantly seeking new challenges (Hall et al., 2007).

8.1.2 Not/Might Novice

Ben, a mature-age urban novice with both intention and a plan to work in remote areas, was also reported in detail in the Strand 2 case study results (See Section 7.2.1). The distance (Table 8-1) between his *Ideal/Current* was large, suggesting that these two elements are very different from each other and implying that his satisfaction in *Current* is likely to be reduced. The very small distance between *Ideal/SuccessfulRemote* indicates that these two elements are similar to each other, suggesting that Ben identifies with the remote workforce, making recruitment to a remote area more likely once his partner's urban work obligations are completed. His combination of average Novelty Seeking and lower Harm Avoidance, together

with very high levels in other traits, seem to match the trends of Strand 1 remote AH professionals. Potentially, Ben's plans to work in remote and his personal trait levels, lower job satisfaction in urban, sense of identification with remote work, and expectation that his *NextJob* will be like his *Ideal*, suggest he may be suited (and likely) to eventually practise in remote areas.

Louise's trait combination and distances between *Ideal/Current/SuccessfulRemote* initially appeared incongruent with remote recruitment and retention (see also Section 7.1.3), despite her stated intention to move to a rural location. As an urban novice, her levels of both Novelty Seeking and Harm Avoidance were more than one standard deviation below the remote AH professionals in Strand 1. Low Harm Avoidance may instil a relaxed and optimistic approach to the possible challenges of remote, and low levels of Novelty Seeking suggests a reflective, orderly manner, both of which may be helpful for longer retention. Conversely, the large distance between *Ideal* and *SuccessfulRemote* suggests that she does not identify with remote. Louise's motivation to seek rural employment was her partner's pending year-long rural relocation, and, as found by Manahan et al. (2009), opportunistic relocation to remote or rural areas to accompany partners can be a potential recruitment strategy. Her personality (and rural background) may suggest potential remote retention, but only if life circumstances permit. Consequently, successful retention would likely hinge on whether her experiences allow her to re-construe rural work as satisfying and able to meet her career development needs, in accordance with Ibarra (1999).

8.1.3 Did/Won't Novice

Nina had recently returned to an urban position following several years in a remote area. Possibly, the combination of her high Novelty Seeking (curious, impulsive, seeking challenge) and low Harm Avoidance (relaxed, decisive) contributed to her decision to accept a remote position straight after graduation. As described earlier (Section 7.1.1), although feeling isolated and unsupported, she worked longer in remote than intended in order to support a junior colleague and to ensure the community received AH services. Potentially, this decision also may have been influenced by her low Harm Avoidance interacting with her very high levels of Cooperativeness and Reward Dependence. However, the lack of supervision and support she reported in the interview, accompanied by decreasing professional confidence, appeared important contributors to her increasing distress in remote and ultimate return to urban. This type of situation was also reported by Steenbergen and Mackenzie (2004), and is a good example of how life circumstances can influence personal trait tendencies and subsequent behaviours. Fortunately, her urban position had implemented a solid support and supervision program that was reversing her loss of confidence. It is, however, important to note the large distance between *Ideal/Current*, suggesting her *Current* is not providing job satisfaction. This

may be related to a need for challenge and variety (high Novelty Seeking), while the closeness between her *Ideal/SuccessfulRemote* suggests identification with remote. Both these distances and her personality trait levels and combinations open the possibility that Nina is suited to remote. Potential points that may need to change if Nina were to be recruited back to remote work may include an increase in support and potentially a commitment to ongoing professional development to maintain and expand her skills. There is insufficient information about Nina's relationship and partner to conjecture how he may affect her potential for future remote 're-recruitment'. Although the literature confirms the influence of family on work location decisions (Campbell et al., 2012; Keane et al., 2012), it also shows that major decisions including relocation can rarely be made in isolation from other responsibilities, i.e. these decisions are not 'conflict-free' (Yufit et al., 1969).

8.1.4 Not/Won't Novice

Despite a rural background, **Teagan** construed herself as not suited to remote and appeared settled and satisfied in her urban position (small distance between *Ideal/Current*) and unable to identify with remote (large distance between *Ideal/SuccessfulRemote*) (See also Sections 7.1 and 7.2.2). Her high Harm Avoidance may have contributed fear or doubt in relation to working in remote (Eley et al., 2009b). Given that she planned a career path to management and that she considered her *Current* as accelerating her career development plans, her high Novelty Seeking levels may potentially have been met by the demands of *Current*. Teagan appears an unlikely recruit to remote work. If her circumstances required working in a remote area, provision of support to offset her Harm Avoidance may be necessary.

8.1.5 Am/Suits Experienced

Faye had high levels of Harm Avoidance coupled with high Novelty Seeking, similar to Dimity. However, unlike Dimity, Faye had very high job satisfaction (no distance between *Ideal/Current*). She had extensive remote work experience based in a small RA4 town which she called an 'urban centre', travelling to RA5 communities hundreds of kilometres away. While levels of Harm Avoidance in remote professionals have been reported elsewhere as average, (e.g. Eley et al., 2009b), and high Harm Avoidance, seen as worrying, fearful and fatigable, may seem counter-intuitive to success in remote, other circumstances or factors may be offering a protective effect. Looking at Faye's constructs, it appears that being understood and valued by her team, as well as a work model that allows her to be patient-centred and to empower disadvantaged clients, are key constructs for defining her work and providing satisfaction. Further evidence included examples during the interview of the professional and personal support offered by her work colleagues, whom Faye described as being at a similar life-stage. Potentially, these factors might have bolstered Faye's longevity by supporting her development of 'place attachment' (Auer & Carson, 2010). The dimensions of place attachment that were

shown to impact retention of doctors in remote areas included work support, personal attributes, social support and lifestyle (Auer & Carson, 2010).

An experienced AH professional who considered herself suited to remote, **Nicole** had average levels of Novelty Seeking and low Harm Avoidance (See also Sections 7.1. and 7.2.4). Congruence between *Ideal/Current/Successful/Remote* suggested strong job satisfaction and an affinity for working in remote. Although she had an urban background, she had spent her professional life in various remote locations. She married a rural person and started a family, suggesting stability and order and providing a new focus unrelated to her professional life. This fits with average levels of Novelty Seeking. Nicole valued making personal and professional contributions to her small community, which probably related to her high Reward Dependence and Cooperativeness (Cloninger & Zohar, 2011). Nicole appears to be a testament to successful recruitment and retention to remote, which seems to have been supported by her temperament and character trait levels.

Ingrid appeared to have reduced job satisfaction (large distance between *Ideal/Current*) despite assessing herself as suited to remote. She had average levels of Novelty Seeking but very high Harm Avoidance. Although her constructs revealed her commitment to clinical work, she also revealed significant frustration with bureaucracy, construed as undervaluing AH professionals. During the interview she used language suggesting pessimism and disillusionment, which may be a reflection of high Harm Avoidance, particularly if combined with challenging life or work circumstances. As an older professional with a broad range of work experience, including overseas and remote locations, her high levels of Persistence and Cooperativeness might have moderated the dissatisfaction she felt and tempered the influence of very high Harm Avoidance (Eley et al., 2009b).

8.1.6 Interpreting the convergence and divergence of the Strands 1 and 2 data

In general, the results from Strand 1 suggested that higher levels of Novelty Seeking and lower levels of Harm Avoidance were associated with working in remote areas (Campbell et al., 2013). However, as pointed out by Grice et al. (2006) and Lamiell (2013), a sample mean does not necessarily accurately describe individuals. Some of the individuals in the Strand 2 sample illustrate this by their divergence from the sample mean, and this section will examine the complexity of interactions between traits and trait levels, as well as life events and how people construe their career paths. Understanding these interactions may suggest practical applications of this study to addressing the recruitment and retention of AH professionals to remote areas. Importantly, life events can certainly override personality trends towards attitudes, decisions and eventual behaviour. The individual life context and environment are paramount to understanding the influences of personality. For example, an acknowledged factor of remote practice is constant challenge and the notion, 'expect the unexpected', which would fit

well with high Novelty Seeking in terms of recruitment and retention. On the other hand, once personnel are out in remote areas, the influence of unanticipated life events, such as developing a significant relationship and settling down with a family, are actions seemingly contrary to high Novelty Seeking.

Strategies for employers or communities may be to introduce novelty and new responsibility into the role of the AH professional at work or within the community. Dependent on the strengths of the AH professional, strategies that could be considered include extended work responsibility, contribution to planning and running significant community events, and participation in influential activities such as the local health board. These types of opportunities are valued by AH professionals (Millsteed, 2001) and importantly boost intrinsic motivation (Lyons et al., 2003; Randolph, 2005).

Potentially, being recognised by the community for broader contributions also positively expands an individual's community connections (Campbell et al., 2012) and may assist in the development of place attachment (Auer & Carson, 2010) or emotional commitment to the region (Allan et al., 2007). It could also increase the sense of 'doing an important job' (Kamien, 1998), which might reverse the dissatisfaction reported by participants such as Ingrid, Dimity and Leila who perceived that their role was not valued.

Successful recruitment to remote generally appeared to be linked to lower rather than higher levels of Harm Avoidance (calmness compared to anxiety in the face of uncertainty). However, the sample demonstrated that individuals with very high or high Harm Avoidance are not necessarily unsuccessful in remote work (e.g. Dimity, Faye and Ingrid). Higher Harm Avoidance may potentially be moderated by other personality traits seen in the sample, including high Persistence, Cooperativeness and Self-directedness. This combination of traits has been shown to work together to produce resilience, a factor that could enhance well-being and therefore potentially improve retention (Eley et al., 2013).

Previous familiarity with the remote environment, often reported as rural origin (Stagg, Greenhill, & Worley, 2009) and widely cited as significant in workforce recruitment and retention (e.g. Keane et al., 2012; Playford et al., 2006), could also moderate the effect of higher Harm Avoidance. Along with familiarity, rural origin may incline people to return to a region where family are located. Dimity was an example of this. Despite lower job satisfaction, she still planned on working remotely for a long time.

Potentially, the sample appeared to have combinations of traits that supported their self-assessment of suitedness or not to remote work, i.e. individuals had a reasonable sense of their likely match to remote. In keeping with Yufit et al. (1969), working in remote for many people, e.g. Louise, Nina and Nicole, was not a 'conflict-free' decision but was also influenced by factors

beyond their actual personality disposition. These included how they construed remote work matching their *Ideal* and therefore being aligned or not with their motivation and career plans. It also included the influence of significant others, their background (rural or urban) and their sense of community connectedness.

8.2 The remote allied health professional: Mapping personality traits and constructs

This section will take a common sense approach to synthesise the TCI results with the constructs elicited by the repertory grids. It will focus only on the AH professionals from Strand 1 with remote experience, and the constructs from Strand 2 that differentiated the *SuccessfulRemote* from other elements.

Analysing the fit between the temperament and character traits observed in Strand 1 with the characteristics revealed in the constructs and ratings from Strand 2 for the *SuccessfulRemote* is a way of maximising the benefit of the mixed methods design. The convergence or divergence of the results from the two strands will guide both the interpretation and utility of the findings (Creswell, 2014), as well as the policy recommendations and the potential for future research presented in the next chapter.

Table 8-2 presents the construct analysis mapped onto the TCI traits. There are four key areas to notice:

1. The TCI traits along the top row show the temperament and character trait levels of the AH professionals with remote experience. These trait results are what the participants reported about themselves using the TCI.
2. The construct codes and their definitions presented in the far left column were derived from the repertory grid data. Using the actual words of participants, these results are what participants construed as personal and motivation qualities differentiating the *SuccessfulRemote* from other elements.
3. The left column headed 'Strand 2 *SuccessfulRemote* construed as' contains the participant perception of the *SuccessfulRemote* as derived from the repertory grid ratings.
4. Each cell of the table containing an 'X' suggests a relationship between that trait and the construct code. For example, confidence in working autonomously is linked potentially with a combination of very high Persistence and Self-directedness and very low Harm Avoidance.

Please note when reading Table 8-2 that the importance of each temperament and character trait in any individual will vary as a result of the combination of individual levels. Depending on

this combination and the way the traits interact, certain traits may exert more or less influence on a person's construing of their circumstances. The quantitative data have shown that certain traits in particular were at significant levels (high or low) in individual AH professionals and in trends seen among the demographic groups. For example, remote females had significantly lower Harm Avoidance compared with all other females, and imaging professionals (technique-oriented) had lower Cooperativeness compared with social workers (person-oriented). It would be impossible to fully describe the interaction of each of the seven traits for each AH professional, and this is beyond the scope of this thesis. Therefore, those traits most relevant and already noted in the data previously presented are highlighted in Table 8-2 to reaffirm their probable influence on each construct.

In a sense, this section represents my construing of the results of the repertory grid results, i.e. my construing of the construing of my sample. This is an important and necessary step in repertory grid research (Jankowicz, 2004). In order to focus on the unique aspects of working successfully in remote areas, the table only contains those construct categories that differentiated between the *SuccessfulRemote* and other elements. In keeping with the individuality and commonality corollaries of Personal Construct Theory (Kelly, 1955a), it would be anticipated that not all participants would construe the *SuccessfulRemote* in identical ways but that there would be sufficient overlap to make some useful general observations.

Table 8-2: Temperament and Character Inventory trait levels of remote allied health professionals mapped onto the construct codes differentiating the *SuccessfulRemote* from other elements

	TCI traits	Mean trait level seen in remote Strand 1 sample:	High Novelty Seeking	Average Harm Avoidance	Very high Reward Dependence	Very high Persistence	Very high Self-directedness	Very high Cooperative-ness	Average Self-Transcendence
Construct code*	Strand 2 <i>SuccessfulRemote</i> construed as:								
Definition									
Autonomous		Strongly autonomous		X		X	X		
		Self-determining, accountable, responsible, decision-making authority							
Role Value		Somewhat valued			X	X			X
		Value placed on role by workplace and community							
Professional Isolation		Supportive team but not same-profession support		X		X	X	X	
		Access to same-profession colleagues							
Professional Development		Access limited		X		X	X		
		Access to training to enhance professional knowledge							
Patient Relationships		Strong, patient-centred relationships with clear communication and no time pressure			X			X	
		Approach to patients							

	TCI traits	Mean trait level seen in remote Strand 1 sample:	High Novelty Seeking	Average Harm Avoidance	Very high Reward Dependence	Very high Persistence	Very high Self-directedness	Very high Cooperativeness	Average Self-Transcendence
Construct code* Definition	Strand 2 SuccessfulRemote construed as:								
Expertise Expertise valued in workplace	Generalist	X	X				X		
Support and Supervision Availability and expectations of support and supervision	Not readily available	X	X				X	X	
Flexibility Adaptability to uncertainty	High level required	X	X				X	X	
Career Development Personal drive to develop career, and availability of career opportunities	Some opportunities available						X		
Dual Roles Personal and professional boundaries	Overlap between personal and professional roles		X	X			X		
Motivation Extrinsic or intrinsic incentives	Motivated by need, challenge, learning opportunities	X				X	X		

	TCI traits	Mean trait level seen in remote Strand 1 sample:	High Novelty Seeking	Average Harm Avoidance	Very high Reward Dependence	Very high Persistence	Very high Self-directedness	Very high Cooperative-ness	Average Self-Transcendence
Construct code* Definition	Strand 2 SuccessfulRemote construed as:								
Cultural Approach Cultural considerations for service provision	Culturally centred with strong relationship, effective communication, valuing cultural knowledge as expertise and non-judgemental	X	X	X			X	X	X
Driven Gets on with the job	Driven and has trouble saying 'no'				X	X	X		
Independent Geographic separation from significant others	Extremely independent		X				X		
Adventurous Embraces change and new possibilities	Adventurous	X	X						

8.2.1 Construing the personality and motivation traits of the *SuccessfulRemote*

The first ten constructs listed in the table are largely ones conferred by the workplace. March and McPherson (1996) found the work environment had an important effect on performance, facilitating or inhibiting individuals to demonstrate the attributes of their *Ideal* professional. Thus, successful recruitment and retention to the remote workplace requires a positive interaction between the individual's personality and the demands of the workplace. In general, these workplace attributes have been previously reported in the literature and, as described in the literature review on motivation (Campbell et al., 2012), act as an extrinsic incentive or hygiene factor preventing job dissatisfaction.

The remainder of the constructs in the table relate to attributes of the individual. Some of these may shape intrinsic work motivation in remote AH professionals. For example, the construct of patient relationships may interrelate with the intrinsic incentives previously reported of community connections and serving in an area of need (Campbell et al., 2012).

8.2.1.1 *Autonomous: Successfully managing a workplace attribute*

The workplace of the *SuccessfulRemote* was construed as requiring significant autonomy on the AH professional's part. It could be considered that the trait combination of very high Self-directedness and Persistence supports their autonomy by strengthening their sense of competence in the job. Frustrations are anticipated and managed but do not overwhelm. Their industrious approach to work challenges, taking responsibility for decisions and a resourceful effective work style make them valuable employees. Being average in Harm Avoidance may help balance feelings of anxiety and fear about their responsibility and independence.

8.2.1.2 *Role Value: Successfully managing a workplace attribute*

The contribution of AH professionals to the health of individuals in remote communities was construed as being not fully appreciated. These feelings are reflected by managerial action such as leaving positions vacant to create cost savings and by colleagues who fail to refer patients or use a team approach to client management. Very high Persistence may potentially enable the AH professional to cope with these frustrations because Persistence infers a focus on accomplishment of the task rather than dwelling on dissatisfaction arising from needing to frequently explain and justify their role. Very high Reward Dependence may create disappointment because of an over-concern with what others think. While this thesis has not really focussed on Self-transcendence, it is a trait that concerns a person's view of themselves within the broader, more universal context of the world and humanity and therefore may support AH professionals to develop an alternative perspective on why others are not appearing to value their roles.

8.2.1.3 Professional isolation: Successfully managing a workplace attribute

The literature and the Strand 2 data echo each other in regard to the reality of the professional isolation experienced by remote AH professionals. Very high Self-directedness, Persistence and Cooperativeness potentially support a clear focus on work goals, while average Harm Avoidance can be an asset in most situations because it represents a positive balance and outlook on difficult situations without being overly anxious about the outcomes. In particular, higher levels of Harm Avoidance (seen more commonly in the novices) may exacerbate a sense of professional isolation and lack of support for professional decision-making due to a tendency towards low confidence and unease with uncertainty.

8.2.1.4 Professional development: Successfully managing a workplace attribute

The challenge of obtaining professional development while located in a remote region has been well-documented (Stagnitti et al., 2005) and includes negotiating and sourcing appropriate courses or training, accounting for travel and accommodation costs, and factoring the time to travel as well as attend the event. This can make accessing professional development a significant time commitment. Having very high Self-directedness and Persistence may enable a goal-focussed plan to manage this efficiently. Potentially, average Harm Avoidance may also facilitate managing the work that accumulates during the absence without feeling overwhelmed.

8.2.1.5 Patient relationships: Successfully managing a workplace attribute

Very high Reward Dependence and Cooperativeness would imply strong caring attitudes and empathy for patients that include going out of the way to make things work (Thomas & Clark, 2007). An example of this was given by Faye's initiative to procure and deliver general supplies to communities when she travelled.

8.2.1.6 Expertise: Successfully managing a workplace attribute

Generalist expertise was widely recognised as required in remote workplaces, and the literature calling for this to be recognised as a speciality is robust (Greater Northern Australian Regional Training Network, 2013; Keane et al., 2012; O'Toole, Schoo, & Hernan, 2010). An AH professional with high Novelty Seeking and average Harm Avoidance is potentially well-placed to be a generalist because of low levels of worry and anxiety and their curious exploratory interest in challenges. Very high Self-directedness would also be supportive of seeking the necessary expertise to deal with the broad range of presentations.

8.2.1.7 Support and supervision: Successfully managing a workplace attribute

Both the Strand 2 data and the literature converge on the limited support and supervision available in remote areas (Dawson, Phillips, & Leggat, 2013; Millsteed, 2001), with novices at particular risk

(Lincoln et al., 2013). High Novelty Seeking, average Harm Avoidance and high Self-directedness would compensate for low support without producing feelings of being overwhelmed and isolated (Eley et al., 2013). Josefsson et al. (2011) also noted that high Cooperativeness and Self-directedness combined with social support positively influenced well-being, thus possibly moderating the effects of limited professional support.

8.2.1.8 Flexibility: Successfully managing a workplace attribute

Cooperativeness is a very important attribute for working with others in a flexible and tolerant manner. Participants construed this flexibility as achieving positive work outcomes despite aggravating circumstances, and being flexible in personal views so as to account for others. Potentially, average Harm Avoidance also contributes to work goal achievement in the face of uncertainty, while high Novelty Seeking suggests new ways to approach problems, and very high Self-directedness helps maintain focus despite uncertainty.

8.2.1.9 Career development: Successfully managing a workplace attribute

Very high Self-directedness is the key to achieving goals in a purposeful way that facilitates the achievement of long-term outcomes such as formulating and achieving a career plan. In remote areas this could mean recognising and capitalising on the career development opportunities available (Manahan et al., 2009). Not all participants developed constructs about career development in remote. In keeping with the experience corollary of Personal Construct Theory, this could mean that, based on their understanding of remote, these participants didn't construe any differences between remote and urban settings in regard to accessing suitable career opportunities.

8.2.1.10 Dual roles: Successfully managing a workplace attribute

Many participants construed dual roles as implicit in remote work (Allan, Ball, & Alston, 2008; Cheers, Darracott, & Lonne, 2005). Very high Reward Dependence has both positive and negative influences in relation to successfully managing dual roles. The ambiguous position of being both a friend (or relative) and a health professional to community members creates issues of boundaries, power and trust which need to be recognised and accounted for (Bodor, 2004; Halverson & Brownlee, 2010). Average levels of Harm Avoidance may assist in reducing anxiety over this dilemma, while very high Self-directedness may assist in staying focussed on priorities.

8.2.1.11 Motivation: A personal attribute brought to the workplace

The premise that intrinsic incentives provide job satisfaction while extrinsic incentives reduce job dissatisfaction (Herzberg, 1987; Herzberg et al., 1959) aligns with the construing of Strand 2 participants about the *SuccessfulRemote*. The *SuccessfulRemote* was seen as motivated by the

challenges associated with remote work, the contribution to an area of need (intrinsic incentives), and the potential remote workplace learning opportunities (extrinsic incentives). This may imply that high levels of Novelty Seeking (seen as curiosity and exploration) are important, in addition to purposeful goal-directed attributes of high Persistence and Self-directedness. Persistence may be more influential for extrinsic incentives, which need to be sufficient to avoid job dissatisfaction.

8.2.1.12 Cultural approach: A personal attribute brought to the workplace

The *SuccessfulRemote* had solid expertise in cross-cultural knowledge, relationships and communication. Potentially, this might be facilitated by high Cooperativeness and Reward Dependence in combination with average Harm Avoidance. This would be demonstrated by AH professionals with principled tolerance and compassion who seek effective and ethical ways to relate, using a relaxed approach to managing cultural differences. As stated earlier, while this thesis has not really discussed Self-transcendence, it is a trait that may influence an individual's cultural approach because of the big-picture view of humanity that it encourages.

Novelty Seeking may motivate some individuals to seek cross-cultural remote work as a new adventure (Carson, Coe, Zander, & Garnett, 2010). However, this exploratory curiosity would need to be tempered with high Cooperativeness and Self-directedness in order to transition into effective longer-term retention (Hall et al., 2007).

8.2.1.13 Driven: A personal attribute brought to the workplace

Given that the *SuccessfulRemote* was construed as someone who has difficulty saying 'no', it is suggested that this behaviour indicates a desire to please, i.e. very high Reward Dependence. High Self-directedness and Persistence may also assist in driving an AH professional to achieve what needs to be done for the good of the community and individuals. For example, Fiona provided remote private AH services despite the personal time and financial loss she incurred.

8.2.1.14 Independent: A personal attribute brought to the workplace

Both lower Harm Avoidance and very high Self-directedness may be facilitative of the independence seen in *SuccessfulRemote*. Thus, a confident outlook combined with goal-setting to achieve purposeful, resourceful work may better enable management of the inevitable geographical separation from significant others that is common in remote practice.

8.2.1.15 Adventurous: A personal attribute brought to the workplace

Being adventurous is often associated with remote lifestyles (Manahan et al., 2009). Both high Novelty Seeking and average Harm Avoidance may combine to be manifested as someone who enthusiastically embraces challenge with a sense of confidence. These people are comfortable

with accepting risk and uncertainty associated with remote work, including the necessity to travel long distances, cope with weather vagaries, and manage a challenging workload.

8.2.2 Conclusion

This combination of data – the convergence (and divergence) of empirically measured personality traits with the construing of AH professionals about what it means to be successful in remote work – has never before been presented. While the goal of this synthesis was to integrate the Strand 1 and 2 datasets (Creswell, 2014), this also importantly has practical utility.

Firstly, it has shown that personality traits are indicative, not prescriptive. Crucially, it is the combinations of traits and the trait levels that influence an individual's personality (Cloninger et al., 1993; Cloninger & Zohar, 2011). Further, it needs to be recalled that all traits are malleable. While temperament traits are particularly influenced by genetic, innate biological processes (Cloninger, 1994), character is also heritable but more strongly develops across the lifespan in response to socio-cultural experiences. Paramount to the understanding of personality is its multidimensional nature. Thus, it is the combination of trait levels arising from life experience and heritability that make people unique and may influence the successful recruitment and retention of any individual to remote work.

Secondly, the construing of individual AH professionals in comparing themselves with others has provided a unique insight into the characteristics of remote workplaces and of people well-suited or unsuited to coping in those environments. At an individual level, this allows us to recognise those well-suited by their own construing, those less suited by their own construing, and those who are potentially not well-suited but demonstrate less insight into the demands of the workplace and its fit with their personal characteristics and circumstances. The construing about remote work by the participants shows remarkable alignment across groups of AH professionals, lending credibility to the findings.

Thirdly, most participants appeared to have a good idea of their suitedness to the remote context. In general, the participants' self-assessed suitedness aligned with their construing about working in remote both in terms of the constructs they developed during the repertory grid interview and their ratings on the elements, as well as with the combinations of trait and trait levels they exhibited.

Thus, the factors from this section that add to evidence for remote recruitment potential are a positive self-assessed suitedness, realistic construing or understanding of the remote environment, a sense of dissatisfaction with the current work position, and personality traits that support working successfully in remote. These appear to be lowered Harm Avoidance (increased optimism) and elevated Novelty Seeking (sense of adventure). This aligns with previously published literature (e.g. Eley et al., 2009b). Combinations of high levels of Persistence (industriousness despite fatigue), Reward Dependence (social attachment) and Self-directedness (resourcefulness) are also

notable (Ball et al., 2014; Eley et al., 2014; Eley et al., 2013; Eley et al., 2011), and supported by the evidence in how the *SuccessfulRemote* was construed.

Chapter 9

Conclusion and Recommendations

9 Conclusion and recommendations

This thesis has created new in-depth knowledge about the personal and motivation attributes of allied health (AH) professionals and remote workplaces that may be conducive to creating a thriving remote workforce. It has therefore answered the research question and made an important contribution to the problem of recruitment and retention of AH professionals in remote Australia.

The literature review in Chapter 2 addressed both motivation and personal traits in order to understand how these may influence recruitment and retention in remote areas. The literature described a range of factors as influential in remote AH professionals' motivation for work. In addition, this thesis extended and contributed to that literature, further analysing it from the perspective of Herzberg's seminal intrinsic and extrinsic incentives framework (Campbell et al., 2012). This analysis revealed the potential for erosion of job satisfaction of AH professionals in remote areas due to the absence of positive extrinsic incentives (e.g. access to professional development, professional support and supervision). While intrinsic incentives (e.g. autonomy, community connectedness and challenge) were highly valued, it appeared that these might not be sufficient to outweigh the negative influence caused by the substantial absence of extrinsic incentives.

In canvassing the literature, important emerging evidence of the influence of personal traits on career selection, and recruitment and retention to rural areas was found for the medical and nursing workforce. There was, however, a paucity of knowledge about both AH professionals' personal traits, and the application of personal traits in understanding the contributors to successful remote work. This thesis was designed to address that gap, and both trait theory and Personal Construct Theory were presented as important to the methodology.

The mixed methods design was a strength of this work and resulted in a combination of data that has never before been available. It used a two-strand convergent parallel QUAN→QUAL/QUAN approach. The well-validated biopsychosocial measure of personality, the Temperament and Character Inventory (TCI) (Cloninger et al., 1993), was used in the largest known sample of AH professionals in Australia in order to understand the personal trait levels of AH professionals, in particular those with interest in working in remote areas. In parallel, the unique methodology of repertory grid interviews (Jankowicz, 2004) provided original qualitative and quantitative insights into the construing of AH professionals about the remote work environment and the personal traits helpful in the remote context. This design, bringing together two important methodologies, has extended the utility of the findings.

The findings were detailed in Chapters 4 to 7. Strand 1 results were presented *via* two peer-reviewed published papers in journals with a high readership by AH professionals, employers and policy-makers with an interest in remote areas and the recruitment and retention challenge

(Campbell et al., 2013, 2014). The statistical analysis presented personal trait findings by remote experience, as well as by professional leanings (i.e. person- or technique-oriented) and specific professions. A summary of the key findings will be provided in Section 9.1.

The Strand 2 methodology, repertory grid, is a unique technique well-suited to the research aims of understanding the construing of AH professionals in relation to personal characteristics that contribute to success at work, particularly in the remote work environment. The richness of Strand 2 repertory grid interview results were presented in three chapters. Chapter 5 described the sample characteristics and missing data, Chapter 6 presented a fine-grained analysis of the constructs elicited during the interview, and Chapter 7 used a quantitative approach to understand the ratings on the elements, or work roles, that were the focus of the interviews. A summary of the key findings will be provided in Section 9.1.

True to the mixed methods design, Chapter 8 focussed on synthesising the Strand 1 and 2 findings into a coherent message underscoring the relationships between the two strands. This final chapter, Chapter 9, will distil the essence of the thesis through presentation of a series of key findings, with recommendations drawn from my entire PhD research. These recommendations will suggest policy implications applicable to enhancing recruitment and retention of AH professionals to remote and rural areas, derived from the key findings about the characteristics that assist AH professionals to thrive in remote areas. However, the thesis will caution that a 'one size fits all' approach is not helpful. Instead, administrators responsible for creation of policy and employment of AH professionals should listen to the voice of AH professionals in their region in order to understand the most relevant way to apply these findings.

9.1 Key findings

This section will highlight the key results described in Chapters 4-7. Each strand will be reviewed individually. In particular, this section will emphasise the findings that make new contributions to the field, that are most important in answering the research question, and that potentially influence the recruitment and retention of AH professionals to remote areas.

9.1.1 Strand 1: Personal traits as measured by the Temperament and Character Inventory

A highlight of this thesis is that no previous research has reported a cross-professional AH personal trait study with a sample size of nearly 600 participants. These findings represent a major new research contribution.

Compared with population norms (Cloninger et al., 1993), AH professionals were found to exhibit mature personalities (Kluger, Laidlaw, Kruger, et al., 1999), with very high Reward Dependence, Persistence, Self-directedness and Cooperativeness. High levels of these traits, particularly Self-directedness and Cooperativeness, have been associated with well-being (Josefsson et al., 2011)

and resilience (Eley et al., 2013). These levels align with the literature and suggest congruence with the demands of health professionals' responsibilities such as decision-making, sensitive interactions with clients, and a high degree of professionalism (Eley & Eley, 2011). Self-directedness and Cooperativeness, being character traits, are potentially modifiable; therefore, as surmised by other researchers (e.g. Adamson et al., 2003), the AH professionals might have matured as a result of professional socialisation processes during training and in the workplace. Lower levels of Self-transcendence compared with population norms were also aligned with reports of other Australian health professional groups (e.g. Ball et al., 2014; Eley & Eley, 2011). Lower Self-transcendence fits with the practical attitude useful in healthcare, as it implies a generally objective and evidence-based approach to life.

In the discussion woven throughout Chapters 4-7 it was suggested that trait levels and combinations of certain levels might inhibit or promote 'thriving', rather than 'surviving' in remote. Consequently, through a better understanding of personality, recruitment and retention policies could capitalise on or support the individual AH professional in a more targeted way. Specific recommendations aligned with the findings will be detailed in Section 9.3.

9.1.1.1 Strand 1 findings from Chapter 4: Remote and Not Remote allied health professionals

This analysis revealed statistically significant differences between AH professionals with and those without remote experience. It was found that the traits of remote professionals appeared a good fit with the demands of working in remote regions, with similar differences to those reported in the literature for rural doctors and nurses. In summary, compared with AH professionals with no remote experience, remote AH professionals exhibited:

- higher levels of Novelty Seeking and Self-transcendence
- Harm Avoidance levels which approached significance, with remote experience associated with reduced levels
- lower Harm Avoidance levels in women with remote experience (compared with women without remote experience)
- lower Reward Dependence in older AH professionals with remote experience (compared with younger AH professionals with remote experience)
- lower Self-directedness and higher Harm Avoidance in the younger AH professionals with remote experience (compared with older AH professionals with remote experience).

Differences in trait levels, particularly those associated with remote experience and age, have practical implications for policy that will be addressed in Section 9.5.

9.1.1.2 Strand 1 findings from Chapter 4: Person- or technique-oriented allied health professions

The significant contribution of this analysis was to explore differences in personal traits of AH professionals based on the focus or orientation of their work. This work focus was either person-oriented³⁷ (PO) (socially dependent, cooperative and relationship-focussed), or technique-oriented³⁸ (TO) (focussed on skills and procedures). Differences in personality trait levels were found between the PO and TO professions, and between specific professions, and these may have implications for recruitment and retention policies for remote areas.

The key trend was for higher levels of Reward Dependence, Self-directedness, Cooperativeness and Self-transcendence in PO professions than TO professions. This finding appears plausible, given that people who exhibit higher Reward Dependence and Cooperativeness are seen as more socially attached, empathic and helpful. This suggests that PO professionals, whose work requires regular long-term interactions with patients, have a propensity to build strong trusting relationships. In comparison, the patient relationships of TO professions are often single-instance and focussed on achieving a technical outcome (e.g. assessing vision, taking an X-ray, or dispensing a prescription). The trends in traits thus appeared congruent with the orientation of the profession and supported the utility of the classification.

Between-profession trait differences were also found to be largely congruent with the professions' orientation. For example:

- Self-directedness was higher in psychology and social work (PO) compared with imaging (TO).
- Cooperativeness was lower for imaging (TO) than psychology, social work and occupational therapy (PO).

The findings suggest policy could be enhanced by understanding the implications of the PO-TO classification in order to tailor support appropriately for the AH professional. In remote areas, appropriate support is particularly important and this issue will be revisited in Section 9.3.

9.1.2 Strand 2: Repertory grid interviews

The unique contribution of the repertory grid technique to the study was demonstrated through the qualitative and quantitative information it elicited. It revealed differences between workplaces that were important to the participants when considering where they wanted to work. More specifically,

³⁷ PO professions: Aboriginal health work, dietetics/nutrition, exercise physiology, occupational therapy, physiotherapy, psychology, social work, speech pathology

³⁸ TO professions: audiology, health promotion, imaging, medical laboratory science, optometry, oral health, orthotics or prosthetics, orthoptics, pharmacy, podiatry

the interviews revealed the construing of participants about the attributes of successful AH professionals, comparing those working in remote areas with those in other workplaces³⁹. The constructs⁴⁰ were coded using a framework organised by personal and workplace attributes, a procedure which resulted in rich qualitative findings. Quantitative findings were generated statistically from the ratings on the elements⁴¹ on each construct. Both qualitative and quantitative analyses looked within individual grids and across the whole sample of grids.

9.1.2.1 Strand 2 findings from Chapter 6: Construct analysis

The repertory grid interview provided novel information not easily obtained using other methodologies. It facilitated comparison between AH professional workplaces and the attributes that contribute to success in those workplaces. Because this technique has not been used previously with AH professionals, these differences offer important policy implications. The research demonstrated that the sample construed both the remote workplace and the personal characteristics required to work in remote workplaces as different from work in other settings, in particular the hospital setting.

The evidence presented in Chapter 6 showed that the AH professional working in the hospital setting, represented by the *HospitalOther*, was construed as working within a system that offered strong professional support and supervision but imposed a bureaucratic structure that limited autonomy and required tolerance. The *HospitalOther's* professional role was both understood and valued positively by patients and the team, including the medical profession. Their expertise was generally construed as specialist in nature, with concomitant opportunities for focussed and accessible professional development and career opportunities. A benefit of working in a large institution was the reduced effort required for the *HospitalOther* to develop a patient relationship because trust was imbued by the system. However, the *HospitalOther* had to adapt to time pressures, with reduced time per patient generally construed as weakening continuity of care and the reward of strong patient relationships.

Chapter 6 also confirmed differences in how AH professionals working in remote settings, represented by the *NoviceRemote* and *SuccessfulRemote*, were construed. Potentially, many of the constructs idiosyncratic to the *NoviceRemote* and summarised below, appear to be linked, acting to either enhance or exacerbate each other. The *NoviceRemote* was construed as very adventurous and flexible. Potentially, the adventurous spirit may, in some AH professionals,

³⁹ Work roles and work places were referred to as elements.

⁴⁰ Personal constructs elicited during the interview are specific to that individual and form that individual's construct system. They are statements of understanding of the individual about a topic and are said to exist on a bipolar continuum.

⁴¹ Each construct was rated by the participant for each element on a scale of 1-5, where 1 and 5 were at either end of the bipolar construct.

contribute to recruitment. Despite also being construed as optimistic, this protective trait appeared threatened by the need to manage generalist caseloads in a complex remote environment where geographical vastness and a cross-cultural service delivery were construed as daily realities. Previous familiarity with such environments appeared helpful to novices and has been reported in the literature as associated with remote recruitment (Keane et al., 2012).

By definition, the *NoviceRemote* lacked experience compared with the *SuccessfulRemote*. This inexperience potentially amplified the challenges faced in remote work. For example, an inexperienced AH professional with embryonic professional confidence may be less able to self-manage the effects of professional isolation and limited same-profession supervision and support, compared with someone with experience, with a previous familiarity with the region, or with solid family or social support.

Social learning theory recognises that knowledgeable models influence appropriate actions in novices, particularly if those models possess characteristics deemed desirable or useful (Bandura, 1989). This further reinforces the importance of reducing professional isolation and offering support and supervision through access to same-profession models (e.g. *SuccessfulRemote*), to promote successful work performance. Potentially, this could offer a range of benefits in areas where the *NoviceRemote* was construed as struggling; for example, easing discomfort in managing dual roles, increasing competence in cross-cultural service provision, developing skills in managing competing professional demands, and assisting development of reflective practice.

The urban novice participants who considered themselves unlikely to work in remote developed constructs identifying the limited support and supervision available for *NoviceRemote* quite early in their interviews. Jankowicz (2004) advised that constructs identified earlier in the interview may be of greater importance in the individual's construct system, thus highlighting the potential deal-breaking importance of supervision and support to novices. Consequently, recruitment of novice AH professionals who self-assess as unlikely to work in remote areas and who identify supervision and support as important, would appear improbable without significant expansion of support and supervision strategies.

The *NoviceRemote* was construed as motivated by the challenge and needs in remote areas, suggesting a self-efficacious attitude of contributing, and an ability to rise to the expected challenges. Whether or not this is realistic would be specific to individuals and so should be tempered by monitoring for potential cumulative effects of the challenges in the remote workplace that may result in stress rather than success. Well-designed supervision and support could ameliorate this risk and increase the likelihood of retention.

Role value was a construct that appeared to present particular risks for *NoviceRemote* to become disenchanted with work. The generalised rather than specialised nature of working in remote could

result in some *NoviceRemotes* construing that their services are so generic or common sense as to be deliverable by any health professional. Additionally, the ability to match one's role and services with community need, or 're-define yourself for each community' as suggested by Deanna, may be better suited to the experience and confidence of *SuccessfulRemote*, rather than a novice.

Particular mention should be made of cross-cultural service approaches. The constructs related to cultural competence were extensive, and the application of cross-cultural work across *NoviceRemote*, *SuccessfulRemote* and *HospitalOther* demonstrated variation. While construing cultural knowledge as everybody's business is important if it facilitates owning the importance of cultural competence, there is a risk of minimising the specific expertise that a truly culturally competent AH professional, such as *SuccessfulRemote*, has developed. Cultural expertise particularly may be devalued by individuals who see it as a soft skill, a person-oriented skill that is less valuable than profession-specific technical skills. Solid cross-cultural skills and a desire to work cross-culturally may support longer-term retention.

Miles et al. (2006) reported that novices view remote work as facilitating career development. The Strand 2 sample did not appear to share that perspective. Rather, they construed the *SuccessfulRemote* as having some career opportunities but choosing to prioritise factors such as family. In comparison, the *NoviceRemote* had clear career goals but limited opportunity to develop them. Potentially, this perception of remote, or construing about remote career opportunities, may inhibit recruitment and also reduce retention of novices unless they can reframe or recognise opportunities in remote work as advantageous to career development. Recognition and validation by employers of individual AH professionals' career aspirations could be of assistance.

Implications from these construct findings will be applied in Section 9.3. The findings may inform policy change to address the challenges and capitalise on the positives of the remote AH workforce, and may assist in recruitment and retention.

9.1.2.2 Strand 2 findings from Chapter 7: Element analysis

The important contribution from analysis of the repertory grid elements was a measurement of job satisfaction and an indication of the extent to which participants identified with working in remote. It did this by statistically comparing, or analysing, how alike or different various elements, or work roles, were from each other. The calculation (double-scaled Euclidean distance) resulted in a measurement between one and zero, where zero indicated the two elements were completely alike, and one indicated the two elements were completely different from each other. Rather than using a statistical significance figure, this section considered whether the two elements being compared were more ($D_{xy} < 0.5$) or less ($D_{xy} > 0.5$) like (closer to, or more distant from,

respectively) each other. It specifically investigated distances across the sample generally, as well as for specific groups or individuals.

Job satisfaction was investigated through calculation of the distances for all participants between their *Ideal* and *Current*⁴². A distance of 0.5 was considered as indicating the respondent was neither satisfied nor dissatisfied, while $D_{xy} < 0.4$ was taken as indicating the respondent was more satisfied than dissatisfied. On that basis, the majority (24/34) of participants were more satisfied than dissatisfied. Despite the literature findings reported earlier (Campbell et al., 2012) that extrinsic incentives with a negative influence outweigh intrinsic incentives with a positive influence, the participants appeared largely satisfied. However, in keeping with the literature, dissatisfaction in the remote participants appeared related to constructs about supervision, support and remote roles not being valued. Implementing recruitment and retention policies addressing these workplace attributes that act as extrinsic disincentives appears essential.

The distance between *Ideal* and *SuccessfulRemote* was used as a measure of a participant's identification (Ellis-Scheer, 2000) with remote where less distance indicated stronger identification than greater distance. A large proportion of participants (29/34) construed the two elements as more like than unlike. This suggested that for most participants, *SuccessfulRemote* and *Ideal* were construed as having overlapping characteristics. This finding may open the possibility for recruiting AH professionals not already in remote. Constructs associated with a large distance between *SuccessfulRemote* and *Ideal* included professional and personal isolation and limited career development options. Opening the possibility of recruiting participants who had a large distance between *SuccessfulRemote* and *Ideal* would require policy changes that addressed the isolation and career challenges.

Paradoxically, some urban novices with remote intent appeared to identify more strongly with *SuccessfulRemote* than the remote novices. Perhaps the urban novices had an idealised perception of the work of the *SuccessfulRemote*, while the first-hand experiences of the remote novices might have provided realistic insight into the specific challenges of remote practice and the way that this can vary dependent on context and available support. This suggests that retention of remote novices could be at risk, and supportive policies should be considered.

The construing of the sample that their *NextJob* was like their *Ideal* suggested optimism for career choices ($D_{xy} < 0.5$ for all except one participant with the majority $D_{xy} < 0.3$). In participants who indicated interest in remote work, recognising the point at which they are open to changing work roles may provide a window of opportunity for recruitment. Additionally, the retention of existing

⁴² Higher job satisfaction indicated by smaller distance between *Ideal* and *Current*, compared with larger distance suggesting dissatisfaction.

remote AH professionals may be enhanced if remote areas had a number of work options such that AH professionals could change jobs without leaving the region.

Close examination of the four case studies demonstrated the valuable insights available from repertory grid data analysis using singular value decomposition (SVD) plots. As a graphical illustration of the relationship between the constructs and elements, the SVD plots showed exactly how each individual construed working in remote in comparison to their construing about their *Ideal*, *Current* and *Hospital/Other*. This information is insightful from an idiographic perspective, because it creates a visual display of the participant's construing about personal and motivation attributes related to success at work. Importantly, it also makes a significant contribution in this thesis from a methodological perspective by clearly demonstrating the utility of Personal Construct Theory and the repertory grid technique to reveal in-depth construing of individuals on topics of high research importance. This methodology could be applied to a variety of problems that would further extend our understanding of remote workforce issues, for example understanding how AH professionals construe the influence of life-stage on recruitment to remote areas, or comparing the educational or orientation activities that an individual might access prior to commencing in a remote workplace.

9.2 Key findings from synthesis of Strands 1 and 2 in Chapter 8

Chapter 8 highlighted the strength that the mixed methods design provided in answering the research question. The combination of empirically measured personal traits with the construing of AH professionals about working in remote areas converged to provide new evidence on which to base rural and remote AH workforce recruitment and retention policies and practices.

The personality trait results, together with the repertory grid results, suggested the following key findings:

- Allied health professionals appear to have mature personality characteristics noted by high or very high levels of Reward Dependence, Persistence, Self-directedness and Cooperativeness, in addition to higher Novelty Seeking and average Harm Avoidance.
- There is not one combination of temperament and character traits that is prescriptive of successful recruitment to and long-term retention in remote. While higher Novelty Seeking and lower Harm Avoidance appear to be a combination suited to the remote environment, the interaction between traits in conjunction with the context of the individual is paramount. This interaction ultimately determines behaviour, decisions and fit with the demands of the work environment.
- The context of individuals includes their self-assessed suitedness to remote work, their life-stage, their personal construing about their ideal careers and work roles, previous

familiarity with remote, and opportunities available in remote areas that they construe as extending or valuing their contribution to the communities they work in.

- The trait levels exhibited by the remote AH professionals tended to be reflected in the Strand 2 construing about the personal attributes of *SuccessfulRemote*, suggesting congruence between the empirical trait measurement and the sample's construing about 'what it takes' to work in remote.

Having now summarised the key findings of the thesis, a range of recommendations will be presented that draw on the findings and that will potentially be helpful in recruitment and retention of AH professionals to remote areas.

9.3 Recommendations

This thesis has presented a substantial amount of novel evidence about the personality traits seen in AH professionals who work in remote areas, and how working in remote areas is construed by both the AH professionals who work there and those who do not. In total, this evidence provides a base on which to develop recruitment and retention policies and practices likely to be helpful in creating work environments where people can thrive. In keeping with Russell et al. (2013), it is not suggesting that recruitment and retention issues can be totally eliminated, but rather that the suggested changes add another piece of the puzzle to optimise the fit of the workforce in remote.

Despite the initial focus in this thesis question on the personal traits of AH professionals that may enhance recruitment and retention in remote areas, both the literature and the Strand 2 data made it clear that the attributes of the workplace also contribute to job satisfaction and work success. Workplace attributes are part of the milieu influencing AH behaviour; for this reason, the recommendations will account for personal characteristics as well as workplace attributes that were described by participants and that included the extrinsic incentives affecting motivation.

Potentially, there are a range of persons who could be responsible for implementing the recommendations arising from this thesis. The most obvious ones include the AH professional as an individual, the immediate supervisor of the AH professional, work colleagues, the employer, and human resource personnel in the employing organisation.

It is acknowledged that small remote services may have limited capacity and be geographically isolated from their wider organisation; therefore, creative local approaches drawing on a wider range of resources may be helpful. This wider list could include the relevant professional association (both local and national chapters), Services for Australian Rural and Remote Allied Health (SARRAH) (both local and national chapters), internet-based groups of similar professionals, and collaboration with other agencies, either in the local community or in a larger centre. Ideally, this would include linking with other local health service providers employing

medical and nursing professionals, in order to more quickly validate the presence of and services provided by the new AH professional.

Additionally, the communities themselves could take responsibility for assisting their local AH workforce to develop place attachment (Auer & Carson, 2010). They could assign mentors to assist with cultural or community orientation, with clear responsibility to support the AH professionals to establish personal and professional networks and contribute knowledge that will facilitate rapid integration into the community. Having these types of links, and being valued by and contributing to the community, were found in this thesis to be key intrinsic incentives for long-term remote AH professionals.

Finally, at all levels of government, health workforce reform (Crettenden et al., 2014) could consider policy implementing incentives and schemes such as those in place for the medical workforce (Humphreys, Wakerman, Pashen, et al., 2009). Very few incentives have been available to AH professionals, despite their potential to contribute to retention, particularly incentives that improve workplace conditions and AH professional career development opportunities.

Table 9-1 and 9-2 list factors that impact on recruitment and retention as found in this study. These factors tend to use the language of the constructs as presented in Chapter 6. However, they should also be thought of in relation to the TCI personal trait descriptors, as presented in Table 2-3 in Chapter 2.

9.3.1 Recruitment

From the evidence in this thesis, successful recruitment of an AH professional to remote includes the fit between the individual's personal and motivation traits and the remote context. It is acknowledged that the 'window of opportunity' for recruitment can be influenced by life-stage. Furthermore, some AH professionals who may or may not appear to be a good fit from a personal trait perspective may still seek remote employment for family reasons, such as partner relocation, or simply because it is the only work available at the time.

This thesis has shown that recruitment to remote for some individuals would only occur if they were able to re-construe remote employment as providing job satisfaction and a suitable career path. Recruitment strategies need to consider the way that positive changes in remote work could be demonstrated. These in turn may influence an individual to re-construe how they think about remote work. For example, although not mentioned by participants, the increasing use of social media across all spheres of life and by a wider age range of people than previously, may be an avenue to influence this re-construing through promotional messages enhancing the profile of remote work.

The thesis sounds a significant caution about recruiting novices to remote positions. It provides evidence showing that novices, particularly new graduates without previous professional experience, previous rural or remote experience and only limited life experience, were highly challenged in making the transition to isolated and professionally unsupported remote AH positions. This aligns with literature suggesting that appropriate role models, combined with professional support, are crucial contributors to professional confidence during career transitions, such as from student to practising clinician (Ibarra, 1999; Lee & Mackenzie, 2003; Smith & Pilling, 2008). Perhaps workplaces which are unable to provide stable quality supervision and support should consider policy that precludes recruitment of AH professionals who lack professional, remote (or rural) and suitable life experience.

Strategies to enhance recruitment based on the findings of this thesis are shown in Table 9-1. Some of the findings in this table include recommendations that may be usefully implemented during the orientation period for newly recruited AH professionals.

Table 9-1: Recommendations for recruitment

Factor	Evidence in this thesis	Recommendation to enhance recruitment of allied health professionals to remote areas
Allied health professionals' personal insight, experiences and challenges		
Self-assessed suitedness	Allied health professionals' insight into their suitedness to remote work matched their personal trait combinations and repertory grid data as being conducive to remote work.	At recruitment interview, investigate the individual's motivation for seeking remote work, particularly their previous professional and personal experiences that may assist in their transition to remote work.
Previous experience in remote work, combined with personal traits and attributes	Previous positive remote work experiences appeared helpful, as did higher levels of Novelty Seeking and lower levels of Harm Avoidance and attributes of being driven, having a sense of adventure and appearing flexible.	Recruitment drives, or advertising of remote AH professional positions, could emphasise the adventure and lifestyle benefits for individuals who thrive on challenge and want to make a difference in an area of need. Local communities could consider how they can develop or consolidate rural pipeline-type experiences. These could include supporting local young people to enter the AH professions and facilitating AH students to experience multiple supported experiences in remote settings (Fisher & Fraser, 2010).
Personal relationships in remote	Dependent on the individual, participants either valued dual roles or were protective of their personal privacy. Dual roles with loss of anonymity were seen as inherent in remote work.	Ensure applicants to remote positions understand the implications of dual roles and provide support for those who express reservation or confusion about successfully managing these.
Motivation	Allied health professionals were motivated by intrinsic incentives, but job satisfaction was reduced by lack of extrinsic incentives.	Recruitment packages should stress the intrinsic incentives but allow for practical extrinsic incentives including reasonable funding of professional development activities. Consideration should be given to salary and innovative employment options including retention in private practice.

Factor	Evidence in this thesis	Recommendation to enhance recruitment of allied health professionals to remote areas
Professional challenges and benefits:		
Professional persona	<p>Relevant construct codes were Role Value, and recognition of Expertise, including Generalist work as a speciality and acknowledgement of cultural expertise.</p> <p>Personal trait combinations of individuals appeared suited to the person- or technique-oriented demands of their professions.</p> <p>Both community members and colleagues failed to consistently recognise the specific skills offered by individual AH professions.</p> <p>Participants construed remote work as reducing access to profession-specific professional development, which was detrimental to developing specialist expertise.</p> <p>Being a generalist was construed as becoming 'expert, although it was felt to be poorly recognised as such.</p>	<p>Job descriptions need to clarify specific responsibilities and expectations of roles and should be reviewed regularly.</p> <p>Recruitment packages should include local community introductions and cultural mentoring for all AH professions. This is particularly useful for PO professionals by accelerating the development of important relationships and networks that will increase the effectiveness of their work.</p> <p>Employing organisations could partner with other workplaces (both large and equivalent) for work experience programs that maintain and develop profession-specific skills and knowledge.</p> <p>Professional development should be discussed both at interview and when an offer of employment is made, with the organisation supporting a focus on a required range of profession-specific knowledge and skill areas.</p>
Professional growth	<p>Relevant construct codes were Autonomy, Supervision and Support, Professional Isolation, Career Development and Professional Development.</p> <p>Personal trait levels of high Self-directedness and Persistence.</p> <p>Higher Harm Avoidance levels were seen in some individuals who may be challenged in the face of excessive autonomy and limited or no supervision or same-profession support.</p> <p>Limited supervision was detrimental to individual AH professionals, particularly <i>NoviceRemote</i>.</p> <p>Concern was expressed (particularly by urban novices) that career development opportunities in remote were limited.</p>	<p>Proactively work with communities and other health professionals to develop sustainable support networks, particularly for novices who may be less able to initiate these for themselves.</p> <p>Develop new local mentoring networks and links, including inter-organisational supervision/support and investigating availability from external agencies and networks.</p> <p>Emphasise the autonomy available for experienced AH professionals.</p> <p>Promote and market evidence of strategies that ameliorate the impact of professional isolation, e.g. strategic use of social media to provide positive examples of well-supported positions.</p> <p>Emphasise and build team-based approaches to patient care.</p> <p>Budget for time and costs to facilitate access to professional development that is appropriate to the needs of professionals, including consideration of backfill.</p> <p>Promote and market opportunities that optimise career development.</p>

Factor	Evidence in this thesis	Recommendation to enhance recruitment of allied health professionals to remote areas
Cross-cultural service provision	Remote AH professionals gave extensive evidence of the specific expertise required as well as the challenges and rewards in cross-cultural work.	<p>Ensure applicants for remote positions are open to moving beyond the notion that 'culture is everybody's business' and are open to learning the specifics of each community they will be participating in.</p> <p>Cross-cultural learning time needs to be factored into the job description and workload.</p> <p>Organisations need to institute an individualised program of cross-cultural training that may include relevant language training.</p> <p>Organisations need to initiate sustainable and effective relationships with a range of cultural mentors and Indigenous elders who can be accessed by employees.</p> <p>AH professionals should indicate their willingness to avail themselves of local opportunities to increase cultural knowledge, including accepting invitations from local individuals to events or activities, visiting cultural sites and museums, consulting with experts and developing networks.</p>

9.3.2 Retention

This thesis has demonstrated how high levels of Persistence and Self-directedness make most AH professionals potentially suited to the demands of remote work and could contribute helpfully to retention. Age-related differences, particularly with regard to higher levels of Harm Avoidance, may make younger AH professionals more vulnerable to reduced length of retention due to factors such as construed professional isolation and inadequate support. Conversely, despite high levels of Harm Avoidance, some AH professionals in this thesis were retained well beyond the 'reasonable' two years suggested in the literature (for example see Russell et al., 2013). However, it is acknowledged that higher levels of Novelty Seeking, common among this sample, may work against retention. This is likely in many jobs where the inevitable familiarity and established routine that occur over time may prompt an individual to seek a new position or challenge.

This section will now use the evidence in this thesis to address aspects of the remote work environment that need to change to positively impact retention, and the behaviour of the AH professional construed as helpful in increasing the length of retention. These are presented in Table 9-2. It should be noted that there is an additional column in this table, compared with Table 9.1, addressing experience. The evidence in the thesis was very clear that novices are construed differently from experienced professionals, suggesting that there may be differences in the strategies aimed at retention of novices compared with experienced AH professionals. The strategies should be commensurate with the experience of the AH professional. For example, the novice's lack of experience contributed to a focus on professional skill consolidation, with reduced ability to adapt their practice to the remote setting and a tendency to become overwhelmed. Thus, one column provides recommendations for retaining the experienced *SuccessfulRemote*, while the other column specifically addresses strategies that may assist in retention of the *novice*.

Examining these tables makes it very clear that recruiting and retaining a workforce in remote areas is very different from maintaining a workforce in urban areas. Relocating away from established and conveniently-located professional and personal supports in order to undertake a position in a remote area places stresses on the AH professional which they may or may not be prepared for. In addition to understanding the fit between the AH professional's personal characteristics and the demands of remote work, there is much that the employer, colleagues and the remote community can do to assist the new employee's adjustment to the setting. Both the AH professional and the workplace would do well to consider whether they have the resources to maximise retention.

Table 9-2: Recommendations for retention

Factor	Evidence in this thesis	Recommendation to enhance retention of <i>Successful/Remote</i> (i.e. an experienced allied health professional)	Recommendation to enhance retention of <i>Novice/Remote</i> (i.e. an allied health professional with limited experience)
Allied health professional's personal insight, experiences and challenges			
Personal traits and motivation	<p>The relevant construct codes are Driven, Adventurous and Optimistic; also, higher levels of Novelty Seeking.</p> <p>Higher Harm Avoidance is common in younger AH professionals.</p> <p>AH professionals construed themselves as independent from significant others such as family, but also acknowledged that significant relationships (particularly partners) impact on retention or desire to be in a certain location.</p> <p>AH professionals have high Self-directedness (drive) including motivation to help others (community and colleagues) but may have difficulties with self-care boundaries.</p> <p>AH professionals may be motivated by intrinsic incentives.</p> <p>AH professionals recognise how life-stage impacts on ability to manage certain features of remote work including travel and time away from home.</p> <p>AH professionals may become receptive to settling down and taking on family responsibilities (developing place attachment).</p>	<p>Aim to reduce impact of high Novelty Seeking on retention by enhancing retention across a region (strategies may include cross-organisational collaboration to organise secondment or opportunities to act in higher positions), i.e. keeping the job interesting and challenging.</p> <p>Ensure high proportion of positive intrinsic incentives and adequate extrinsic incentives (including financial support) are available.</p> <p>Discuss strategies that support the balance between family responsibilities and travel demands.</p>	<p>Aim to reduce the impact of higher Harm Avoidance by ensuring personal well-being and support needs are met.</p> <p>Be alert for signs of becoming overwhelmed by work demands and have resources in place to assist.</p> <p>Implement strategies that assist with settling and development of place attachment.</p> <p>Ensure high proportion of positive intrinsic incentives and adequate extrinsic incentives (including financial support).</p> <p>Organisations should source information or networks that assist the AH professional's partner to find employment.</p>

Factor	Evidence in this thesis	Recommendation to enhance retention of <i>SuccessfulRemote</i> (i.e. an experienced allied health professional)	Recommendation to enhance retention of <i>NoviceRemote</i> (i.e. an allied health professional with limited experience)
Personal relationships in remote	<p>Relevant construct codes are related to relationships with patients, colleagues and community members; also high levels of Reward Dependence and Cooperativeness</p> <p>Dual Roles is a reality in remote work. Colleagues are likely to be part of the AH professional's social circle.</p> <p>Patients may also participate in the AH professional's social circle.</p> <p><i>SuccessfulRemote</i> appreciated belonging to a community and valued the respect gained from contributing personally and professionally.</p> <p><i>NoviceRemote</i> was less comfortable with Dual Roles(overlap between professional and personal life) than <i>SuccessfulRemote</i>.</p>	<p>Professional bodies should collaborate with experienced AH professionals to revise regulations or codes of professional practice regarding dual roles and boundaries of practice (which are generally rigid and do not account for or validate the reality of living and working in remote settings).</p> <p>Encourage participation in community life beyond the workplace by exploring options for contributing professionally and personally.</p>	<p>Provide mentoring and supported reflection to assist in confronting potential distress or tension between dual roles and desire for privacy.</p> <p>Encourage participation in community life beyond the workplace by exploring options for contributing professionally and personally.</p>

Professional challenges and benefits

Professional growth	<p>Relevant construct codes are Autonomy, Supervision and Support, Professional Isolation, Career Development and Professional Development; also high levels of Self-directedness and Persistence.</p> <p>Same-profession support was valued by all but seen as critical (and often absent) for <i>NoviceRemote</i>.</p> <p>There is a perceived gap between what the AH professional may perceive they need and what is typically available.</p> <p><i>NoviceRemote</i> is construed as least supported and also likely to have the highest level of Harm Avoidance (anxiety).</p> <p><i>NoviceRemote</i> is construed as low in</p>	<p>Develop innovative and funded access to same-profession support if this is not readily available in the immediate workplace.</p> <p>Institute same-profession peer supervision processes to offset professional isolation and contribute to professional development of individuals (a regional approach may be effective).</p> <p>Professional development plans need to address both organisation and AH professional needs.</p> <p>Partner with a strategic/local university to offer regular student supervision and arrange for academic status to access library resources.</p> <p>Investigate professional development activities offered by the university.</p> <p>Professional development needs to be supported by a</p>	<p>Develop innovative and funded access to same-profession support for the novice if it is not available in the immediate workplace. This support needs to specifically include experienced AH professionals.</p> <p>Provide a mentor and/or supervisor to assist with reflection on practice.</p> <p>Negotiate supportive staff exchanges with an urban partner organisation. This may bolster the professional confidence of remote novices and allow urban novices to 'taste' remote work. Ideally, the partnership would be with the acute service used by remote residents requiring additional care.</p> <p>Professional development plans need to address both the organisation's and the AH professional's needs.</p>
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Factor	Evidence in this thesis	Recommendation to enhance retention of <i>SuccessfulRemote</i> (i.e. an experienced allied health professional)	Recommendation to enhance retention of <i>NoviceRemote</i> (i.e. an allied health professional with limited experience)
	<p>professional confidence and requiring support to reflect on practice.</p> <p>Autonomy in remote workplaces is valued by experienced AH professionals and contributed positively as an extrinsic incentive.</p>	<p>package of time, travel and accommodation to facilitate attendance at conference/training events (minimum of two per year).</p> <p>Membership in professional association and SARRAH should be actively encouraged by employer who could also consider whether the employment package could contribute to membership fees.</p> <p>Active participation in appropriate member networks of SARRAH and professional associations should be encouraged by the employer.</p> <p>Investigate the role of SARRAH in brokering professional development webinar events specific to remote issues.</p> <p>Recognise the expertise of <i>SuccessfulRemote</i> by maintaining autonomy as a feature of remote work.</p>	<p>Professional development needs to be supported by a package of time, travel and accommodation to facilitate attendance at conference/training events (minimum of two per year).</p> <p>Membership in professional associations and SARRAH memberships should be actively encouraged by employers who could also consider whether the employment package could contribute to membership fees.</p> <p>Active participation in appropriate member networks of SARRAH and professional associations should be encouraged by the employer.</p> <p>Investigate the role of SARRAH in brokering professional development webinar events specific to remote issues.</p> <p>Provide or develop appropriate protocols and supervision which may offset higher Harm Avoidance and facilitate confidence in novices to cope with autonomy.</p>
Professional persona	<p>Relevant construct codes are Role value and Expertise; also levels of Novelty Seeking, Harm Avoidance, Reward Dependence, Persistence and Self-directedness.</p> <p>Specific professional skills are construed as undervalued in some remote environments, i.e. the role may not be understood or the work may be construed as generic and able to be done by a non-AH professional such as a nurse. These attitudes were particularly problematic for <i>NoviceRemote</i> who was still consolidating professional confidence.</p> <p>Turnover of community-based remote staff contributed to a loss of valued professional relationships, support and referral sources for fly in/fly out or drive in/drive out AH</p>	<p>Workplaces need to consider the implementation of interprofessional activities that increase respect for and understanding of the contributions of the individual professions.</p> <p>Professional bodies could develop schemes (e.g. awards) that showcase the specialised nature of remote generalist skills.</p> <p>Workplaces and employment contracts should recognise and reward generalist expertise as being specialist.</p> <p>Allied health professionals need opportunities to develop and advance generalist expertise, including visiting each other and observing work undertaken using a peer development or supervision scheme.</p> <p>Recognise advanced technical or interpersonal skills in individuals that are broader than their profession-specific</p>	<p>Provide experienced same-profession mentors to all novices and ensure participation in mentoring is overtly endorsed by providing time for both mentor and mentee.</p> <p>Novice fly in/fly out or drive in/drive out professionals need additional time and support to develop networks within each community and assistance to find ways to maintain these networks between visits.</p> <p>Complement development of strong interpersonal skills in novice by training and feedback regarding behaviours that enhance a positive professional persona (Cooper-Thomas, Paterson, Stadler, & Saks, 2014).</p> <p>Clarify expectations of work role by providing a clear and reasonable position description, key performance indicators, and a process to positively</p>

Factor	Evidence in this thesis	Recommendation to enhance retention of <i>SuccessfulRemote</i> (i.e. an experienced allied health professional)	Recommendation to enhance retention of <i>NoviceRemote</i> (i.e. an allied health professional with limited experience)
	<p>professionals.</p> <p>Generalist expertise is demanded by remote environments, but this can create uncertainty about strategic professional development, undermine career direction and contribute to a sense of being de-valued by one's profession.</p>	<p>focus (PO⁴³ or TO) (See Section 4.3).</p> <p>Fly in/fly out or drive in/drive out AH professionals could maintain their 'ongoing presence' in remote services using practical strategies such as posters on clinic walls with photographs and stories about themselves and their roles.</p> <p>Employer should collaborate with experienced AH professionals when considering changes in service model decisions.</p>	<p>appraise outcomes that will increase confidence of novice.</p> <p>Encourage understanding of the long-term nature of the work, particularly for PO professions.</p> <p>Develop strategies that value the specialised nature of remote generalist skill sets (see also recommendations for <i>SuccessfulRemote</i> in "professional persona in this table).</p> <p>Fly in/fly out or drive in/drive out AH professionals could maintain their 'ongoing presence' in remote services using practical strategies such as a poster on the clinic wall with a photo and blurb about themselves and their roles.</p> <p>Work to develop the confidence of AH professional novice despite potential power imbalances in regard to medical profession, gender or age differences.</p> <p>Pair novices with a supportive community member or colleague who can provide introductions to the community and/or be a role model.</p>
Cross-cultural service provision	<p>Relevant construct codes are Cultural approach; Motivated by working in an area of need; also personal trait levels of high Novelty Seeking, average Harm Avoidance, High Reward Dependence, Self-directedness, Persistence and average Self-transcendence.</p> <p>Cultural awareness was seen as 'everybody's business' but the <i>SuccessfulRemote</i> was seen as holding greater expertise, while the expertise of the <i>NoviceRemote</i> was still developing.</p> <p>Cultural expertise was seen to be culturally</p>	<p>Maintain or develop key links with influential community members.</p> <p>Ensure ongoing access to more formal education in working cross-culturally (e.g. workshops, lectures, online modules, language training, work placements).</p> <p>Partner with community elders or appropriate other community members to share their expertise by mentoring or training novices in cross-cultural service provision.</p>	<p>Cultural mentoring needs to be acquired preferably from an elder or other suitable person identified by the community.</p> <p><i>SuccessfulRemote</i> can also act as a positive role model and mentor for cross-cultural work.</p> <p>Develop a formal program of cross-cultural orientation and education (e.g. workshops, lectures, online modules, language training, work placements).</p> <p>Increase insight into personal characteristics and motivation that may influence the inclination to</p>

⁴³ Person-oriented or technique-oriented

Factor	Evidence in this thesis	Recommendation to enhance retention of <i>SuccessfulRemote</i> (i.e. an experienced allied health professional)	Recommendation to enhance retention of <i>NoviceRemote</i> (i.e. an allied health professional with limited experience)
	centred and relationship-based, valued as specialist knowledge and demonstrating insightful and adaptable communication skills with an accepting non-judgemental attitude.		embrace cultural difference and cultural learning.
Patient Relationships	<p>The trait levels and combinations of PO and TO complemented the focus of the profession.</p> <p>Patient relationships are impacted by the PO or TO focus of the professions.</p> <p>Patient relationships in remote areas are particularly affected by the ability to be patient-centred, manage time well, and have excellent communication skills and a caring approach. <i>NoviceRemote</i> is hampered by inexperience.</p>	Successful management of complex or challenging patient relationships provides intrinsic work reward as long as the professional skills and autonomy of <i>SuccessfulRemote</i> are respected by their workplaces.	<p>Implement support strategies that ensure best practice patient-centred care while gaining sufficient experience to increase confidence and time efficiency.</p> <p>Inexperience of novices means they need to be allowed more time to achieve better patient management.</p>
Career Development	<p>Relevant construct codes are Career Development and high levels of Self-directedness.</p> <p><i>NoviceRemote</i> construed as having only limited Career Development opportunities despite needing to establish their career.</p> <p><i>SuccessfulRemote</i> construed as having some career path opportunities.</p>	<p>Develop opportunities for ongoing development of career goals including responsibilities such as project work and acting in more senior positions, and opportunities for combining private with publicly employed work.</p> <p>See also recommendations under Professional Growth in this table.</p>	<p>Ensure performance appraisal processes and mentoring are used to understand and develop career aspirations and pathways.</p> <p>Assist novices to recognise opportunities available in remote that can expand their professional capabilities and advance their career prospects.</p>

9.4 Study limitations and future directions

This study had several limitations which have largely been addressed in previous sections. Consequently, these will only be briefly addressed here. Additionally, this section will offer several suggestions for modification should the study be replicated in the future.

Sampling strategy limitations: The methods clearly outlined the difficulties in developing a feasible sampling strategy for Strand 1. The snowball sampling precluded the calculation of a response rate. This limitation was fully addressed in Sections 3.3.2, 4.2.5.2 and 4.3.6. Findings from this thesis are important to the literature on AH personality and the literature pertaining to the remote workforce, given the considerable size of the Strand 1 sample ($n=562$). This sample represents the largest investigation of personality in Australian AH professionals to date. The Strand 2 sample size produced over 300 constructs. As the sample size is comparable to those in other repertory grid studies (e.g. Dick & Jankowicz, 2001), the size of the Strand 2 sample is therefore not a limitation. Furthermore, Strand 2 was an exploratory study, in that this was the first use of this methodology with this type of sample. Therefore, the design decisions were important in setting a foundation for possible future research.

It would be potentially informative to explore in more detail those Strand 1 personal traits that were only briefly mentioned in this study. In particular, it would be useful to attempt to understand issues such as the potential role of Self-transcendence in influencing adaptation to remote work, and AH professionals' philosophy towards their contribution, or indeed obligation, towards remote life and culture.

Repertory grid design is a versatile tool that lends itself well to further innovation in both study design and analysis. An extension of the repertory grid results would be to use the construct codes from this study to develop a single repertory grid that was rated by all participants in a future study. This would then produce a series of grids that were identical in every aspect except the ratings. Grids that are specifically matched like this can be analysed in ways that were precluded in this study by the decision to allow participants to develop their own constructs, and the use of specific individuals as elements (Gower, 1975; Grice, 2007b). This design could also include asking participants to rate the salience to them of each constructs, as per Caputi and Reddy (1999, p. 256), or to pick their preferred pole. This would provide interesting comparative information to the *Ideal* element.

For example, the findings from Strand 2 could be extended in future work by developing a single repertory grid based on generic successful AH professional roles in both remote and urban environments. This may allow differences to be seen among *Ideal*, *Current* and a generic AH professional, that may have been obscured by the use of elements that were specific to individuals

known to the participants. In particular, this could provide greater clarity to an urban-based *Hospital/Other* element.

Additionally, future studies could include a broader sample of urban-based AH professionals, choose to focus only on a single profession or compare a PO profession with a TO profession. The results from these studies could then be compared with the results from this thesis.

9.5 Summary and final conclusions

The innovative mixed methodology used in this thesis provided new insights into the personality and motivation characteristics of remote AH professionals and has practical utility for positively influencing recruitment and retention of AH professionals. This information can be added to the approaches currently taken by government and employers in addressing the health service needs of Australia's remote and rural residents. For individual AH professionals, the implications can provide insight into the work demands of remote regions and the personality and motivation characteristics that assist with thriving in an environment of challenge.

The focus of this mixed methods thesis was a unique combination of qualitative and quantitative insights to generate new information to support policy and practice in the recruitment and retention of the remote AH professional workforce. It highlighted the mature personality trait profile of AH professionals, including those with experience in remote areas. Those in remote areas were distinguished by higher levels of Novelty Seeking, characterised as curiosity and desire for new challenges, and the suggestion of lower levels of Harm Avoidance, typified as surety despite uncertainty. Younger AH professionals were more likely to have higher Harm Avoidance, suggesting a greater need for support and supervision. The repertory grids revealed that remote AH professionals and their workplaces are construed differently from other workplaces. In particular, remote AH professionals are perceived as less well professionally supported and limited in supervision, despite working as generalists and struggling with poor recognition for the value they add to patient care in the healthcare system. These challenges are particularly problematic for novices concerned with building their careers. In general, the workforce appeared satisfied despite the challenges, lending weight to the argument that intrinsic incentives, for example, working in an area of need, provide job satisfaction.

Overall, most AH professionals in the sample had a reasonable sense of their suitedness to remote work, and their career location intentions matched the way they described themselves and other AH professional roles during in the repertory grid interviews. This suggests that recruitment processes should ask AH professionals why they want to work in remote areas, what they understand to be the challenges and how they intend to deal with those challenges. Previous experience in urban areas appears to be helpful in dealing with the professional isolation in remote areas, and life circumstances also contribute to the impact of personality and motivation in

successful recruitment and retention of AH professionals to remote areas. Allied health professionals with a predisposition to remote work may exhibit traits that are helpful in managing this type of work environment. Retention is likely to be person-specific and dependent on the personal traits, motivation, experience, support networks and insight of the individual.

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Appendices

Appendix 1: Strand 1 Temperament and Character Inventory examples

For the benefit of the reader, the preamble and example statements from the Temperament and Character Inventory (TCI-R 140) are shown below.

On the following pages, you will find statements people might use to describe their attitudes, opinions, interests, and other personal feelings. Try to describe the way you USUALLY or GENERALLY act and feel, not just how you are feeling right now.

READ each statement carefully and decide which choice best describes you, but don't spend too much time deciding on the answer.

PLEASE answer every statement, even if you are not completely sure of the answer.

REMEMBER, there are no right or wrong answers – just describe your own personal opinions and feelings.

Example statements for Novelty Seeking	Definitely False	Mostly False	Neither True nor False	Mostly True	Definitely True
I often try new things just for fun or thrills, even if most people think it is a waste of time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually think about all the facts in detail before I make a decision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to explore new ways to do things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Example statements for Harm Avoidance

I usually am confident that everything will go well, even in situations that worry most people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I usually feel tense and worried when I have to do something new and unfamiliar.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would probably stay relaxed and outgoing when meeting a group of strangers, even if I were told they are unfriendly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Example statements related to Reward Dependence	Definitely False	Mostly False	Neither True nor False	Mostly True	Definitely True
I usually do things my own way – rather than giving in to the wishes of other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't care very much whether other people like me or the way I do things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am good at communicating my feelings to others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Example statements related to Self-directedness

My actions are determined largely by influences outside my control.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Each day I try to take another step toward my goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know what I want to do in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Example statements related to Cooperativeness

I can usually accept other people as they are, even when they are very different from me..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to be of service to others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't seem to understand most people very well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Example statements related to Self-transcendence

I often feel a strong sense of unity with all the things around me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often become so fascinated with what I'm doing that I get lost in the moment – like I'm detached from time and place.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that most things that are called miracles are just chance..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 2: Completed repertory grid examples

The example repertory grids provided are those of the case study participants presented in Chapter 7. The constructs are shown exactly as participants developed them, not abbreviated. The grids are presented in the following order:

1. Ben
2. Teagan
3. Kylie
4. Nicole

BEN Personal/motivation qualities that contribute to successful practice in the job	1												5
	1. Myself as I am currently	2. Myself in my ideal job	3. Myself in a previous job	4. Myself in a hospital job	5. Most successful remote practitioner	6. Novice remote practitioner	7. Successful urban community health	8. Successful private practitioner	9. Someone else in a hospital job	10. Myself in my next job	11. AHP I consider a role model	12. Myself in a position I would not like	
Memory Jogger	h-m		Dh	W-r	T	Ph-r	C	A-m	L-m	C-r	M-m	H-m	Memory Jogger
Construct (similarity pole)	Ratings from 1 on the left to 5 on the right												Construct (contrast pole)
Holistic experience - role was broad and managed patient in different ways and over a period of time including after discharge and accounting for all of their conditions	4	2	2	1	2	1	3	3	2	2	2	4	Patient care is handed on to someone else, managing a very specific aspect of their care;
Work with patients is results- orientated eg to set up a service, to give a prescription for a diet; driven by bureaucracy	2	5	4	3	4	4	3	2	3	4	3	2	Work with patients is patient-centred and around rapport, listening to the patients issues
Team relationships are dominated by medical doctors, a hierarchy where allied health professionals are not valued, communication is poor- notes not read, people not discuss issues	3	5	5	4	5	4	3	3	4	4	3	2	The team has a good understanding of other people's roles and where they are coming from with their recommendations, time is made available to communicate well, team members put in effort with communication including good listening skills
Range of work locations, varied patient presentations, wide cross-section of patients requires generalised knowledge	3	2	3	1	2	2	2	4	3	2	4	5	Similar patient groups, specific and unchangeable type of work and location requiring highly detailed, analytical and technical knowledge and expertise in an area
Empathy, empowering people and providing people with knowledge to motivate them	2	1	1	2	1	2	1	3	3	2	3	3	Telling people what they need to do without considering their background and reasons for not following recommendations; judging non-compliant patients
Work with patients is results- orientated eg to set up a service, to give a prescription for a diet; driven by bureaucracy													Didn't complete this construct
Motivated to work with economically and geographically disadvantaged people; people with hardships who don't necessarily have a lot of choice or knowledge - the service is needed vitally and often underfunding	3	2	2	2	1	2	2	4	3	2	2	2	Motivated to work in a job where people already have a lot of advantage eg sports dietetics; or cultural similarities; no breadth of difference across workload; focus of work is on people who have choice and knowledge- the service is a luxury; may have prestige and is often financially more viable

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TEAGAN													
Personal/motivation qualities that contribute to successful practice in the job													
	1. Myself as I am currently 2. Myself in my ideal job 3. Myself in a previous job 4. Myself in a hospital job 5. Most successful remote practitioner 6. Novice remote practitioner 7. Successful urban community health 8. Successful private practitioner 9. Someone else in a hospital job 10. Myself in my next job 11. AHP I consider a role model 12. Myself in a position I would not like												
1	SU		Ref-m	Gen med	AS	AS	E-m	K-m	L-m	Mg-m	J	CP-m	5
Construct (similarity pole)	Ratings from 1 on the left to 5 on the right												Construct (contrast pole)
Stability of employment	2	1	4	2	4	5	4	2	1	1	1	1	Employment vulnerable to redundancy because of funding (project funding)
Freedom to be creative with your role	1	1	4	1	4	5	4	2	1	1	1	3	Position is structured with limited opportunities to be creative and innovative in doing things differently
Opportunity for effective interdisciplinary practice to provide holistic care; allows for collaborative problem-solving and support	1	2	3	2	3	2	3	5	3	2	2	4	Discipline-only based work; environment doesn't value strong teamwork
Specialist knowledge and competency	2	1	3	3	3	5	3	1	1	1	1	2	Less aware of role definitions, not specialised and needing to be directed by someone else
Value placed on leadership and taking/providing/supporting leadership opportunities	2	1	4	2	2	4	3	2	1	1	1	3	Set role/routine work that has to be done
Recognition and valued placed on the role by other colleagues and other disciplines	3	1	4	3	4	4	3	1	1	1	1	4	Your work is not appreciated and perception that it doesn't make a difference; your input are not appreciated
Workplace supports learning opportunities financially as well as using strategies such as exposure to diverse cases	1	1	5	1	5	4	5	3	1	1	1	2	Needs of worker for progression and development are not recognised
Competent in cross-cultural work relevant to your local community	1	1	1	1	1	2	1	4	4	1	4	1	Lack of awareness of cross-cultural issues, not connecting with people in an appropriate and respectful way
Stimulating and diverse work from day to day utilising a range of skills and approaches	2	2	2	1	1	1	2	1	4	4	4	3	Routine work
Motivated by the impact that you can have on someone that you are working with- that you can make a difference	3	1	2	2	1	2	1	2	3	3	3	4	Feeling that your work doesn't make a difference and therefore motivated by something else e.g. career path/pay etc
Feel a sense of belonging to the community because you live there and therefore you know the context of your patients/clients	5	5	3	5	1	2	3	5	5	5	5	3	Patients are viewed as patients/client rather than as community members (you don't know their context)
Professional has multiple roles in relationships and so has to be able to deal	5	5	3	5	1	1	3	5	5	5	5	4	Professional is anonymous

KYLIE Personal/motivation qualities that contribute to successful practice in the job	1. Myself as I am currently 2. Myself in my ideal job 3. Myself in a previous job 4. Myself in a hospital job 5. Most successful remote practitioner 6. Novice remote practitioner 7. Successful remote practitioner 8. Successful urban community health 9. Someone else in a hospital job 10. Myself in my next job 11. AHP I consider a role model 12. Myself in a position I would not like												
	Memory Jogger		P-m	A-m	B	S	N	S-m	J-m		C-r	T	Memory Jogger
Construct (similarity pole)	Ratings from 1 on the left to 5 on the right												Construct (contrast pole)
Client-centred looking for best discharge not just getting them out; doctors were supportive	1	1	3	5	2	1	3	1	5		2	3	Time pressure is there; need to be efficient and doctors were keen for discharge due to bed pressure
Limited access to resources to meet client needs but good at networking for support and information to fill that gap	2	4	5	3	3	1	3	3	4		3	3	Having easy access to clinical specialists (or only having a single focus for your caseload), equipment, therapy tools etc
We 'do everything' but don't specialise in anything- you have to know a little about everything- Jack of all trades/master of none	1	3	4	4	3	1	4	4	5	4	4	3	Opportunity to specialise in an area- developing expertise and knowledge in that area and can focus your PD in that area to a lot of depth
Hard to be confident that you know enough and feeling like you are only 'getting by' (you don't have anyone to compare with to check)	2	4	3	4	4	1	5	4	5	4	4	4	Confident that you know your area very well because you work in it everyday and know how to deal with it
Value being challenged and like variety in patients and work location	1	3	3	4	2	3	4	4	5	1	3	3	Value being recognised as a specialist in an area and doing the same thing is not boring
There is no-one to refer to, so you deal with all aspects of patient care and patients get to know you better and you understand the patient's whole journey from sickness through recovery	1	3	2	5	2	1	5	4	5		3	4	Patients can be discharged and referred to another service; but handover can create gaps for the patient and information can get lost in handover
Patients are appreciative of service and are willing to help themselves	1	1	3	4	2	1	4	4	4	1	2	3	Patients act like the world owes them and they need 'it' yesterday
Efficiency of service delivery and numbers of patients seen are less important than providing a service	1	1	5	5	1	1	5	4	5	1	2	5	Efficiency of service is important- targets are set for occasions of service, geographical limits on provision of home visits

NICOLE Personal/motivation qualities that contribute to successful practice in the job	1												5	
	1. Myself as I am currently 2. Myself in my ideal job 3. Myself in a previous job 4. Myself in a hospital job 5. Most successful remote practitioner 6. No/ke remote practitioner 7. Successful urban community health 8. Successful private practitioner 9. Someone else in a hospital job 10. Myself in my next job 11. AHP I consider a role model 12. Myself in a position I would not like													
Memory Jogger			K	S	E	K	M-m	M r				C - r	A	Memory Jogger
Construct (emergent/similarity pole)	Ratings from 1 on the left to 5 on the right												Construct (implicit/contrast pole)	
Confident in ability to steer the client but allow them to call the shots- a holistic approach or family-centred practice (experience is key)	2	1	4	4	1	5	3	1	5			1	3	(Self) focused on the therapy process and outcome rather than the impact on the family and client
Ability to manage time and tasks efficiently to prevent feeling overwhelmed	1	1	4	2	1	5	2	1	1			1	1	Overwhelmed by daily job demands- phonecalls, paperwork, client contact, planning for trips
Skillful at planning for travel and including contingency planning for DNAs, creative with resource selection and adaptable with resources, assessment choices	1	1	4	na	1	4	1	1	1			1	1	Slow and less skillful at planning for travel
Engaging with the community (talks, client-based discussions with daycare, doctor/teacher;) local community knew you as a person- you were approachable and trusted as both a health professional and a community member	1	1	1	5	1	2	4	3	5			1	5	Kept within the 4 walls and responsible to your patient and their immediate family; trusted as a health professional rather than as a person
Broad range of clients results in enjoyment and skill development	1	1	1	4	1	4	1	1	4			1	5	Lack of variety in clients creates boredom and narrowing of skills
Involvement with the community, inside and outside of work is professionally and personally fulfilling - (has influenced my retention)	1	1	1	5	2	2	4	2	4			1	4	9-5 job where your personal life is separate from your professional life, (different circles of friends)
Sense of adventure and new possibilities was the catalyst for starting a rural career	2	1	1	5	2	1	2	1	4			2	4	Being in your comfort zone; not wanting to strike out on your own; comfortable with same old/same old; rejuvenate yourself through changing jobs rather than geographical location
Flexible in applying policies ie using your discretion for caseload management	1	1	2	4	1	2	4	2	4			2	4	Sticking to departmental policies for caseload management
Small size of community facilitates easier communication between professionals working with families across agencies for the families benefit; this is driven by the professionals	1	1	1	5	1	1	4	4	4			1	4	Communication between professionals is more difficult because you might not know the referrer etc, and families can slip through the gaps
Accounting for how the specifics of culture or the local 'cycles' impact on your work	2	1	3	5	2	4	4	1	4			2	2	Aware that culture or local 'cycles' have impact on clients but not really taking these into account
Self-motivating; to keep improving the way you work, or improving your department; you are left to your own devices and responsible for your own quality of work- you are trusted to do a good job and this provides satisfaction	1	1	1	4	1	2	5	1	5			1	2	Work is directed by a manager rather than being self-directed; management style is more controlling
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Appendix 3: Ethics Approval



THE UNIVERSITY OF QUEENSLAND
Institutional Approval Form For Experiments On Humans
Including Behavioural Research

Chief Investigator: Ms Narelle Campbell

Project Title: Remote/Rural Allied Health Motivation And Personality Profile (RRAHMP) Project

Supervisor: Lindy McAllister, Diann Eley

Co-Investigator(s) None

Department(s): School of Medicine

Project Number: 2010000872

Granting Agency/Degree: PhD

Duration: 31st August 2015

Comments:

Name of responsible Committee:-

Behavioural & Social Sciences Ethical Review Committee

This project complies with the provisions contained in the *National Statement on Ethical Conduct in Human Research* and complies with the regulations governing experimentation on humans.

Name of Ethics Committee representative:-

Dr Jack Broerse

Chairperson

Behavioural & Social Sciences Ethical Review Committee

Date

27/07/10

Signature

