CARE WORKER MOTIVATIONS: IMPLICATIONS FOR SOCIAL POLICY AND THE FUTURE CARE WORKFORCE

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Abstract

The United Kingdom is facing an ageing population, which has repercussions for those receiving care, as well as for those funding and providing these essential services. Providing suitable and committed care staff is crucial to meet demand, but the care sector faces poor recruitment and retention of staff. The central aim of this thesis was to understand the factors that motivate individuals to engage and remain in paid care giving, from an evolutionary perspective, and the impact this may have for the recruitment and retention of care workers. Applying an evolutionary perspective, this thesis reconceptualised care work as mutualistic cooperation where both parties gain benefits from the formation of close and distinctive social alliances.

Based on a review of the literature and a thematic analysis of semi-structured interviews with care workers, care work emerged as a mutualist strategy, dependent on a set of key demographic, dispositional and situational factors, functioning within certain resource and environmental constraints. These insights informed the development of a psychometric measure appropriate for the assessment of individual differences associated with participation in care work. Principal component analytic techniques applied to pooled items reduced these to coherent subsets that were relativity unidimensional and potentially associated with care work as mutualistic cooperation.

The resulting questionnaire was surveyed amongst care workers and workers of a similar socioeconomic status to identify individual differences and preferences associated with participation in care work. Logistic regression models indicated significant predictors associated with participation in care work, including preferences for prosocial outcomes, amenable behaviours, and a demographic composition predictable of care work. This thesis concludes that care workers are mutualistic cooperators and that care environments should be structured to promote mutualist benefits in order to recruit and retain committed staff.

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Dedicated to my brother Raj (1988-2011)

1. Introduction

1.1. Setting the Scene

The United Kingdom (UK), like many contemporary societies, is facing an ageing population. An ageing population has repercussions for those receiving care services as well as for those funding and providing these essential services. Providing suitable and committed care staff is crucial to meet demands on care services. In industrialised democratic societies the provision of health and social care for older adults is an issue of social policy. In this introductory chapter the scene is set by charting the demographic, economic and social issues that have shaped the central aim of this thesis: to understand the factors that motivate individuals to engage and remain in paid health and social care giving, from an evolutionary perspective, and the impact this may have for the recruitment and retention of care workers.

This Chapter will briefly describe the ageing population in the UK and how this will exert pressure on current and future provisions of health and social care. Particular emphasis will be placed on the need for social care policy to address the problematic issues of recruiting and retaining staff within the sector. Additionally, current concerns for the safety of vulnerable adults, and requirements for suitably trained staff able to deliver personalised care in these trusted positions, suggests that both the quantity of care workers and the quality of care they provide are important. Within this chapter care work will be defined and considered as a strange occupation to engage in with its low pay and poor conditions of employment. Despite the negative aspects of the work many choose to engage and remain in care work. Here the structure and aims of this thesis will be set in order to understand the factors that motivate individuals to engage and remain in paid care work. But first care work is defined for the purpose of this thesis, with reference to funding arrangements, use of the term ‘care worker’, and the tasks involved in ‘care work’.

1.2. Defining Care Work

1.2.2. Funding and Commissioning Care

For the purpose of this thesis paid health and social care giving refers to publicly and privately funded social care, sometimes also referred to as long-term care. The distinction between health and social care is somewhat arbitrary in the UK as 'social care' contributes towards addressing health care needs, usually in a preventative and rehabilitative manner, whilst 'health care' addresses social care needs in a similar manner (Department of Health, 2005, 2006). Maternal care and mental health care provide two contexts, which conventionally come under the auspices of health care, but where social care needs overlap and are also factored into care plans.

Considering the overlap, the division between health care and social care is partly an artefact of the different funding streams in the UK for these services. Although both are governed by the Department of Health, the responsibility for health care remains with the National Health Service (NHS). Access to NHS care for UK residents is free at the point of delivery; funded through taxation it remains publicly owned in the most part. Whilst there is some private sector involvement, it accounts for only a small proportion of funding, and usually for those that seek health care through private health insurance (Howse, 2007). The system of who will receive care and when is determined by needs alone through primary care services with referrals to specialist secondary care services when required.

Social care, which has frequently been characterised as long-term care, entails assistance with tasks of daily living, such as personal care and domestic support. Recipients of social care services tend to receive these in residential, nursing, or community care settings. The responsibility for social care provision falls under Local Authorities (LAs), with councils possessing social service responsibilities principally contracting out care packages to be purchased by profit and not-for-profit care providers (Howse, 2007). Under current policies in England, Wales and Northern Ireland the provision of social care services is *means-tested* as well as *needs-tested.* It is the assessment of eligibility criteria for financial assistance towards the cost of care services

that distinguishes social care from health care. The role of LAs in this process is chiefly to assess entitlement to public funds, with the private sector providing the bulk of the care. This process of assessing financial means and eligibility criteria has resulted in the greatest share of the cost for social care being met by private means (Howse, 2007). Distinct from health care social care lacks the universal entitlement to care, except for Scotland where the provision of the personal care element is free of charge. Differences in assessing entitlement, and the fact that England has the largest proportion of social care recipients and services in the UK (Francis, 2012; O'Brien & Francis, 2010), prompted the primary focus of this thesis on social care provision in England.

1.2.3. Care Work and Paid Care Workers

When referring to care work in this thesis the focus is on paid social care work with adults, as opposed to children and adolescents, and specifically older adult service users. As acknowledged in the previous section, any distinctions made with health care are ones of funding arrangements and provisions, social care often includes aspects of health care within the provision of personal care. In addition, care settings such as nursing homes and some forms of residential and domiciliary care often provide basic medical care as standard. Essential to care work though is the long-term nature of the care and the provision of assistance with essential activities of daily living. This assistance was traditionally provided in residential care homes, but is now more frequently being provided within the service user's own home (Howse, 2007). Family members in many cases provide some unpaid assistance with essential activities of daily living, often in addition to domiciliary care services and unpaid (Cangiano et al., 2009), but in the case of this thesis it is the paid, unrelated care workers that are of interest.

The paid social care workforce is split into two types of workers, professional care workers and direct care workers. The professional type consists of social workers, occupational therapists, nurses and other workers in the sector with relevant professional qualifications. The direct care worker type provides assistance with the essential activities of daily living and makes up the majority of the social care workforce, estimated at over a million in England alone (Hussein, 2011a; Office of National Statistics, 2001).

Referred to interchangeably as care assistants, personal assistants, home carers and support workers, the tasks and skills required from direct care workers remains essentially the same across these job titles. In a skills survey for the Department of Education and Employment (Brown at al., 2000), the skills required for conducting direct care work were numerous, ranging from personal care in the form of cleaning, lifting and handling, to basic medical care, hygiene and handling food. Accordingly, in the course of their work, direct care workers utilised skills such as: communicating, negotiating, monitoring, observing and following reporting requirements in line with legislative demands (Eborall & Garmeson, 2001). Care work can also incorporate some domestic tasks such as shopping, advocacy, and social tasks such as supporting access to leisure activities and other means of engaging in a social life.

Generally, it is these direct care workers performing this range of tasks in community settings that fall under the definition of care workers for this thesis. The main recipients of their care services are older adults (Wanless, 2006), a crucial point when considering the future provision of long-term care in an ageing population.

1.3. Future Care Provision as a Problem for Social Policy

1.3.1. The Ageing Population

In 2001, and crucially for the first time in the UK, there were more people aged over 60 than there were under 16, with a projected estimate of one in four people being aged 65 or over by 2050 (Cracknell, 2010; Select Committee on Economic Affairs, 2003). By 2030 those aged over 80 are projected to double, and the number of people aged over 85 is predicted to increase by approximately 180 percent (Cracknell, 2010; Department of Health, 2008). This trend is not unique to England; a similar trend has been occurring across other European countries, as a consequence of the large number of 1960s baby boomers ageing and a general increase in longevity (European Commission, 2008). Factors such as net migration and changes in the birth rate could alter projected population demography as could restrictive policies and economic conditions (Cracknell, 2010). However, as it currently stands, England is facing an ageing

population, and this demographic transition is likely to have significant economic and social bearings on the population as a whole.

Of note will be the ratio of economically active aged adults to those of pensionable age. In 2008 the number of individuals of an economically active age for each individual of pensionable age was 3.2, a ratio that is considered will drop by 2033 to 2.8 (Cracknell, 2010). On top of this extended post-economically active period, brought about by extended retirement, average government spending on retired households is double that for non-retired households. Growing expenditure is likely to present further challenges to the economy (Appleby, 2013; Office for Budget Responsibility, 2012), but in this thesis it is the challenges to the provision of older adult social care that is of interest. Increased longevity entails a growth in age-related neurodegenerative and musculoskeletal conditions, which will place demands on both health and social care services and their corresponding budgets. The average cost of hospital and community services for over 85s is triple that for those aged between 64 and 74 (Cracknell, 2010). As a consequence, health and social care budgets are predicted to increase drastically (Cracknell, 2010; Wanless, 2006).

1.3.2. Intergenerational Transfers – From the Family to the Public Purse?

Traditionally, elderly relatives and dependent children have relied on their family members for social and economic resources (Mason and Lee, 2006, 2007). Although the intergenerational transfer of resources and care have generally been downward from parent to child (Lee, 2003, 2010) reflecting the relative fitness benefits of investing in younger relatives compared with dependent elderly relatives (Kaplan, 1994). Some resource transfers have also gone upward to elderly relatives, and usually in a symmetric position to reflect what physically and economically active adults would expect to receive when their time comes. In other words, care and other resources are given to elderly relatives via a transfer similar to what they would expect to receive by way of support from their own children. However the complexity of elderly care needs, and changes in the household structure in industrialised democratic societies have changed this model of care-giving within the family. Although the greatest share of care is still provided by family members, the changing population demography has

financial implications on the distribution of care responsibilities, resulting in care commonly becoming 'outsourced' from the family (Martin, 2007).

This is where the public purse has 'stepped-in' in contemporary rich societies with developed welfare systems. Similar to the transfers made within families, transfers take place through the taxation system. Private transfers within the families are through life bequests to children as well as by other means. Tax contributions in England, for example, mirror this downward investment in publically-funded institutions with education and health care systems providing care to children. Individuals reap the benefits of a publicly funded education system as children, and then contribute through taxation to the education of the next generation in a symmetric position, once they become economically active themselves. This process continues so that everyone contributes and everybody gains (Lee, 2000).

Public sector transfers serve another important function, they motivate individuals to invest in areas where the drive may not be so great in fitness terms, but the outcome of the transfers would make everyone better off in general wellbeing terms (Frank, 2011; Lee, 2000). Such as the introduction of services that maintain safe roads and clean streets as an example. Contributions made through taxation systems toward pensions and tax-funded long-term care services provide other examples. Net transfers still tend to be downwards for private family transfers, but public transfers have reversed this net flow in contemporary rich societies (Lee, 2003). Countries like England, with a developed welfare state providing long-term care coupled with early retirement relative to life expectancy, have pushed public transfers upwards. This difference can be seen when comparing transfers made in rich countries, in contrast to those made in both contemporary hunter-gatherer and low income agricultural societies, where transfers have generally remained downwards (Lee, 2000, 2010). Better health and welfare systems in contemporary rich societies have promoted healthy ageing, benefiting the public purse as well as individuals, by providing preventative care for older adults and reducing the cost of unnecessary hospitalization and expensive residential care at the societal level.

In England, both family and public care providers deliver the bulk of the care to older adults, but as the population ages both private and public transfers are becoming ever more unsustainable (Commission on Funding of Care and Support, 2011). A greater demand is already being placed on social care services and this is likely to continue and impact on social care policies and funding streams in numerous ways (Wanless, 2006; Commission on Funding of Care and Support, 2011).

1.3.3. The Impact on Care Services

Certain social care policies, beyond the complex means and needs testing for social care, have impacted on the current state of social care in England. The social care sector changed significantly after the implementation of the Community Care Act (National Health Service and Community Care Act 1990). These reforms brought a shift from institutional care to community-based care with an emphasis on care given within the home or care within a 'homely' environment. Specifically for older adults this saw the closure of geriatric wards and a growing number of older adults with high level needs remaining in the community (Sinclair et al., 2000). Survival to older age entails a greater risk of dependency on intensive social care services; maximising the safety of a home not fit for intensive care needs requires further risk assessments, care workers and suitable equipment. As a consequence, these additional resources exert pressure on social care services with an increased need for more staff to go from home to home (Brown et al., 2000).

Alongside these reforms there has been a move towards service provision and quality assessment being driven by service user involvement. Most recently, this has taken shape with the government's commitment to a personalisation agenda (Department of Health, 2008, 2010). The purpose of this is to shift care to a more person-centred approach, tailoring care to meet individual needs. Service users will have more control over how and when they receive services in the future. Although the core skills of care workers should remain the same, much more may be required from care workers in order to adapt and address needs in a much more personalised manner. In focus groups and survey research conducted with those receiving care from a care worker in a personalised way, the following attributes were considered very important to the

majority of those surveyed: motivated staff that they could trust; care workers that understood their need for control over their own lives; care workers that could be flexible, adaptable, and understanding; and care workers that actively listened to them and respected their privacy (Skills for Care, 2010).

Good quality care workers matter to service users as much as the quantity matters in meeting demand for care workers in ageing populations. However, limited funding can restrict both fronts. Training care workers, meeting minimum wage requirements, addressing health and safety issues and working time directives for holidays and benefits, all incur higher costs (Brown et al., 2000). At the same time, budgetary pressures on LAs equate to limited public funding for social care. Limited funds in LAs have been directed to those with the greatest needs, meaning that those with lower level needs encounter greater difficulty in securing much needed care services (Means et al., 2002; Wanless, 2006). Representatives from home care provider services have stated that fees paid for commissioning home care by the government do not cover the cost of staffing care workers (O'Brien & Francis, 2010). While the quantity of contact hours of home care has doubled since 1997, the quantity of people receiving care services has decreased by 18 percent (Francis, 2012; O'Brien & Francis, 2010). Needs-testing in association with means-testing has resulted in care services targeting those with 'substantial' and 'critical' needs. Social services have to assess care needs by certain eligibility criteria, but for government to keep pace with demand, those with lesser needs may receive less or nothing (Means et al., 2002; O'Brien & Francis, 2010).

In terms of social care funding, the current system is in need of reform. Care recipients are assessed for contributions made to their care, which are considered unfair and unsustainable in their current form (Commission on Funding of Care and Support, 2011). Local authority contract prices fail to keep up with inflation and the statutory burdens care services face in the employment of care workers (Francis, 2012; O'Brien & Francis, 2010). Additional public funding for social care would help in the supply of care workers needed to meet the increase in demand. However, this would not address a more pressing concern; how to fill the high occurrence of vacancies in the care sector and reduce the high staff turnover encountered by care services (Eborall & Garmeson, 2001).

1.3.4. Recruitment and Retention of the Care Workforce

The data on vacancy and turnover rates per annum have been somewhat fragmented by service user group and type of work, but the proportion of vacancies tend to vary from 5 to 16 percent, and staff turnover rates from 7 to 30 percent (Eborall & Garmeson, 2001). Poor recruitment and retention of care workers impinges on the implementation of any government policy for the expansion or personalisation of social care services. Part of the problem may be situated in the lack of public funds for social care as previously discussed. This view is supported with evidence that suggests that care workers are disproportionately susceptible to being underpaid or being paid at the National Minimum Wage (NMW: Low Pay Commission, 2012). Recent estimates range between 9.2 to 12.9 percent of care workers being underpaid in relation to the NMW (Hussein, 2011a), however care workers tend to have few qualifications and are largely non-unionised, lacking the bargaining power to increase their pay.

Low pay may adequately account for high vacancy rates and turnover, however the most comprehensive review of the existing evidence on the nature and extent of issues with recruitment and retention noted that other factors are also likely to be involved (Eborall & Garmeson, 2001). Moreover, it was reported that difficulties with recruitment and retention in the social care sector extended beyond care workers, with similar issues reported for social workers. Qualifications, professional status, better pay and terms of employment among social workers should make them more inclined to remain in the care sector if poor recruitment and retention centred solely on pay and conditions of employment.

Care work, unlike social work, can be a source of transitional employment. For recruitment, this means competition from other relatively low paid service sectors, such as retail and catering, offering less demanding and messy work with more attractive terms and conditions of employment (Eborall & Garmeson, 2001). Low status, menial perceptions of the work, and a lack of career progression are also considered as a hindrance to recruitment. In research commissioned by the Department of Health, six focus groups were conducted with members of the general public on attitudes towards,

and knowledge of, social care. Attitudes were consistent across age, sex and socioeconomic groups. Care work was viewed as a positive vocation, fulfilling a role in society, with care workers perceived as motivated by doing good. However, care work was not seen as an appealing option for the majority that participated in the groups, with most citing low pay, unattractive domestic and demanding work as the reasons for this. At the same time, knowledge on what care work actually involved was very limited in terms of responsibilities, pay and career opportunities (Research Works, 2001).

Retention was linked to social care providers managing the cost pressures of purchasing care contracts from LAs at the lowest price, in order to remain competitive (Eborall & Garmeson, 2001). One potential outcome of this cost pressure was employers being seen as lacking investment in the care workers they employed; indicating a lack of job security and assured regular working hours for care workers. This might be reasonably attractive for those seeking temporary work, but will ultimately result in a high turnover leading to inconsistent care for service users and further recruitment and training costs for care providers. Purchasing procedures may influence retention, but other factors were implicated such as: the demanding nature of the work; time pressures in moving between service users - particularly in domiciliary care; anti-social hours; lack of career opportunities; working in relative isolation; personal safety concerns, and lack of contact with other care workers (Eborall & Garmeson, 2001).

Despite the poor pay and conditions, many decide to engage and remain in care work. In a survey of over 500 care workers, job satisfaction and likelihood of recommending the work to others were both high (TNS UK, 2007a). Notwithstanding the difficult aspects of care work and low pay, most were generally happy in their work. The main rewards of care work stemmed from helping others and a desire to gain qualifications.

The policy advice from this desk research on recruitment and retention in the care sector was to invest in care workers to try and retain them; working with the satisfaction, goodwill and resilience in those presently employed. Further recommendations focusing on changing public perceptions, improving funding arrangements and training staff were noted (Eborall & Garmeson, 2001). However, in this same report, the authors commented that employers of care workers remarked on the caring aspect of the

work as a natural attribute which could not be taught, and that training was important, but not the only factor in maintaining committed care workers.

In terms of increasing recruitment, advertising opportunities for men in day care services and residential care were recommended, as was recruiting from school and college leavers (Eborall & Garmeson, 2001). These proposals for recruiting additional staff from untapped labour markets failed to consider why these populations were under-represented in care sector in the first place. The nature of work may be more attractive to certain individuals than others for a reason.

The government responded to the Eborall and Garmeson (2001) report by increasing investment in social care resources, initiating a national advertising campaign to recruit more care workers in recognition of the pressure felt by high vacancy rates. The campaign was set to showcase that social care workers found their work rewarding and satisfying (Department of Health, 2002).

Since this government investment in social care, turnover rates have remained poor (Eborall & Grittiths, 2008) and the number of males and younger people entering care work has reminded fairly static (Hussein, 2009; Skills for Care, 2012). In addition, safety concerns relating to care workforce recruitment have risen in prominence, with the publication of a recent statistical report on the abuse of vulnerable adults (The NHS Information Centre for Health and Social Care, 2012). Over 90,000 cases of risk or abuse were reported over a one year period. In 61 percent of these the victim was an older adult, and in 25 percent of cases, the perpetrator was a care sector employee. Enhanced Criminal Records Bureau checks and current recruitment practices have not been sufficient to prevent individuals who intend to harm vulnerable adults from entering the care workforce.

1.3.5. An Alternative Approach

Previous initiatives, which aimed to address the problems of recruitment and retention, were based on challenging the negative public image of care work and providing more training to improve prospects for, and investment in, care workers. This approach was

devised to tackle the perceived negative and undesirable aspects of the work, and to encourage a greater number of people to engage in care work, principally by attempting to draw people from demographic groups not previously attracted to care work. Indeed, the number of care workers has increased somewhat, but the turnover rate remains dismal (Eborall & Grittiths, 2008), especially if future social care needs are to be met.

If care work is poorly paid, and considered as unpleasant and demanding work, it is peculiar that people should choose to engage and remain in it. Furthermore, that they actually gain satisfaction from it. A more fruitful approach to address issues with recruitment and retention would be to focus on the positive aspects, and the potential benefits that motivate individuals to engage and remain in care work in the first place. Essentially - who is drawn to care work and why? Research is needed into these motivational factors to provide a new outlook for addressing the crucial issue of recruitment and retention.

The purpose of this thesis is to attempt to bridge this gap by examining individual differences between care workers and other occupational groups, in order to understand the relationship between demographic, dispositional and local environmental factors that influence the decision to engage and remain in care work. In essence, engaging in care work will be viewed from an evolutionary perspective as a behavioural strategy in response to a particular environment, and examining it as such has great predictive utility, and may well give rise to a more focused recruitment strategy.

1.4. Thesis Structure and Aim

The central aim of this thesis is to understand the factors that motivate individuals to engage and remain in paid health and social care giving from an evolutionary perspective, and the implications these have for recruitment and retention. To achieve this aim, the structure of the thesis is as follows:

To Establish what is Known about Care Workers and their Motivations

The first stage is to review the current literature available on paid care giving to substantiate what is known about who paid care workers are, and what motivates them to become and remain care workers. Theoretical models for understanding care giving behaviours in this context are largely absent, and those that do exist are limited to sociological and economic appraisals of care work as emotional labour, which is essentially poorly paid and lacking in social status. Chapter 2 summarises the current available literature on care workers and their motivations, as well as some relevant research on workers in other health and social care professions, to gain a wider scope on motives for care giving in occupational contexts.

To Present an Understanding of Care Work from an Evolutionary Perspective

Reviewing insights from the available literature highlights the need for a theory-driven approach for understanding the processes underlying motives for engagement in care work, particularly why certain individuals would be more inclined to participate and remain in care work more than others. Chapter 2 introduces an evolutionary psychological perspective for understanding these motivations. Paid care of older adults is delivered in part as a public good in England, but one where care workers receive relatively low pay for demanding work, with some unpleasant aspects to it. The low pay and consequent socioeconomic position are unlikely to offset these costs. Chapter 2 of this thesis acknowledges the costly nature of paid care work and argues that those that remain in the care sector do so because they derive other hidden social benefits. The application of this theoretical perspective for understanding paid care work will be evaluated further in Chapter 7 of this thesis.

To Explore Care Workers' Motivations and Experiences of Deciding to Engage and Remain Care Work

Chapter 2 charts the population of care workers as a potentially distinct group characterized by demographic, dispositional and situational factors. In order to explore these further, and to better reveal the strategic decisions care workers might be making,

interviews with care workers about their decisions and motivations for engaging and remaining in care work are presented in Chapter 4 of this thesis. Findings are presented to give greater insight into the hidden social benefits of care work. Care work emerges from these interviews as a mutualist strategy, dependent on a set of key demographic, dispositional and situational factors, functioning within certain resource and environmental constraints. The social benefits take the form of the distinctive social alliances formed in care work.

To develop a measure to assess for individual differences associated with participation in care work

The findings from Chapters 2 and 4 indirectly inform the development of a questionnaire measure to assess for individual differences in the factors considered important for participating and remaining in care work. Chapter 5 will present the development of the resulting questionnaire.

To Identify Individual Differences between Care Workers and Other Occupations

The questionnaire developed in Chapter 5 will be used to assess for the key demographic, dispositional and situational factors and preferences predicted to be associated with engagement in care work in Chapter 6. Based on the qualitative findings from Chapter 4, and the literature review from Chapter 2, predictions can be made on how care workers might differ from individuals engaged in other similarly low paid occupations. This questionnaire study in Chapter 6 aims to identify the individual differences and preferences associated with participation in care work, with the underlying assumption that care workers are adopting a mutually cooperative social strategy.

To Consider the Implications for Social Care Policy and the Recruitment and Retention of Care Workers

Findings from the empirical chapters of the thesis (see Chapter 3 for a methodological overview of these) will be discussed in Chapter 7, in relation to the literature reviewed in Chapter 2, and the demographic and social care policy issues outlined in this chapter

(Chapter 1). Where applicable, findings will be used to make recommendations for social care policy in the recruitment and retention of care workers.

2. Literature Review

2.1. Introduction

England has an ageing population that will increasingly require health and social care. This is a significant challenge. Much of the government and privately funded social care within England is undertaken, and is likely to continue to be, by low-skilled and low-paid care workers. Poor recruitment and retention of care workers has impeded attempts to maintain and expand the care workforce to the necessary capacity. More information is needed to establish who care workers are and what motivates them to engage with and remain in care work.

This chapter seeks to review the current literature available on paid care giving to substantiate what is known about who paid care workers are, and what motivates them to become and remain care workers. Theoretical models for understanding care giving behaviours in this context are largely absent, and those that do exist are limited to sociological and economic appraisals of care work as emotional labour which is essentially poorly paid and lacking in social status. This chapter will summarise the current empirical findings and theoretical approaches available on care workers and their motivations, as well as some relevant research on workers in other health and social care professions, to gain a wider scope on motives for care giving in occupational contexts. In addition, an evolutionary approach to understanding the causes of cooperative behaviours will be introduced to give insight into the history and function of caring for others.

The application of evolutionary psychology as the theoretical framework for understanding paid care giving, together with the available literature on occupational care giving, forms the antecedents to the research questions addressed in this thesis, and the proposed methods for investigating them. Both of these are outlined in further detail in Chapter 3, but the focus for this chapter will be to introduce the literature that has led to these assertions.

2.2. Research on Care Workers and their Motivations

2.2.1. Availability of Information about Care Workers

Prior to 2006 there was a scarcity of information about who paid care workers were, which was notable given that care workers were the single largest occupational group in the health and social care sector (Office of National Statistics [ONS], 2001). The information that was known at the time about paid care workers was limited to a few demographic factors. According to Eborall (2005) the vast majority of care workers were female, estimated at over 95 per cent, with those aged between 35 and 49 being the most frequently represented age group in the care workforce at the time. In 2006, it was widely reported that an estimated 14 to 16 per cent of the care workers were born outside of the United Kingdom (UK), with some regional variance noted for areas such as London, which had an estimated 68 percent of care workers born outside of the UK (ONS, 2006). Outside national level population surveys, other key demographic factors were largely unavailable or undocumented in England prior to this period.

The lack of basic demographic information about care workers was consistent with the general lack of research on care workers as a population in their own right. Eborall (2005) concluded that steps were required to increase the available knowledge about the care workforce, and to regularly monitor changes within its composition. Recognition of the scarcity of available information led to changes in the amount of data collected on the care workforce with the introduction of National Minimum Data Set for Social Care (NMDS-SC), set up by Skills for Care (2007). The dataset was designed as a source for gathering information about care services, and more centrally, care workers. This dataset was made available for employers to aid them in planning the skill and training needs of their workforce (Department of Health, 2008). Setting up of this resource was the only national dataset gathering information about paid care workers on a regular basis. With a dearth of routinely collected and publicly available data on paid care workers, this source has provided the majority of the demographic data cited in the following subsections of this review.

In terms of the literature available on care worker motivations, this has been somewhat limited in comparison to the demographic data. Much of the findings presented in the

following subsections were sourced from research conducted in countries outside of the UK, on populations broadly defined as direct care workers without professional status - a definition in accordance with the description given in Chapter 1 for care workers within this thesis. Research on the influence of personality and other individual differences on motivations for engagement in care work have generally focussed on: students training towards a qualification in a health or social care profession; practitioners working in a health and social care profession; or individuals volunteering in health and social care services and institutions. Findings from these areas of research may provide some useful and potentially comparable insights into general occupational care giving motivations, although caution should be raised in assuming that all care-related occupations (paid and unpaid) fit into a unitary category in terms of motivation and experience. As Martin (2007) has pointed out, the different qualifications and job descriptions of a nurse, in comparison to that of a care worker, may impinge on what motivates them and how they derive satisfaction from their work. For this thesis, a similar position is taken, but it will be discussed in terms of trade-offs that pertain to the particular situational context of paid care work.

For this reason, comparisons drawn from the studies on the motivations of other health and social care workers and volunteers were entirely speculative with regards to motivations for engaging in paid care work. The inclusion of these studies in this review was to fill the gaps in the literature on paid care workers, where appropriate, and to serve as examples. Of particular interest to this thesis were potential insights gained from research sampling professions such as nursing and social work, where workers share similar tasks and roles to that of paid care work. However, it should be noted that these professions have a higher social status, better pay than care workers do, and less direct contact time with service users. Therefore, any comparison made could not be directly extrapolated to care workers. First and foremost, this review used the available literature on care worker demography and experiences to build a picture of who care workers are and what motivates them. Findings from other health and social care occupations are used later in this review to bridge gaps within this body of research, but the applicability to understanding care worker motivations should be treated with some caution.

2.2.2. Care Worker Demography

The introduction of the NMDS-SC (Skills for Care, 2007) has allowed for the reporting of consistent trends over time in the English care workforce in terms of sex, age, ethnicity and nationality. Data from this source, together with data from population surveys, have led researchers to report on these consistencies, which endorse the position that the care workforce may differ from other occupations in terms of demographic composition.

Since 2007, the number of males entering care work has increased somewhat from the estimated 5 percent in 2005 (Eborall, 2005). Although males still do not participate in care work to the same extent as females do, the care workforce still consists of a notable and stable portion of males, approximately 15 percent according to figures released between 2007 and 2012 (Hussein, 2009; Skills for Care, 2012). This finding has been partly attributed to males being less attracted to part-time work, and a lower percentage being drawn to domiciliary care as opposed to residential care work (Skills for Care, 2008). Employment opportunities in home care work vastly outnumber opportunities to work in residential care homes (Skills for Care, 2012). Any preference for a position in residential care homes would limit individuals from entering the care workforce.

Others have postulated that the evidence for an increase in the number of males working in the care sector between 2000 and 2009 was a consequence of an increase in the number of males from migrant backgrounds entering care work (Hussein, 2011b). This indicates that evidence of an increase in the number of males being drawn into care work might be better understood as an increase in the number of migrant males being drawn to care work, than males in general. Differences in the proportion of females and males entering care work do suggest the possibility for differential preferences for participation in care work based on sex, but possibly in combination with other factors.

Demographic data also appears to suggest a steady trend towards care workers being older on average than the employed adult population, with a mean age of 40 and a standard deviation of 12 (Hussein, 2009). In particular, reference has been made to a high proportion of ‘third age’ workers (those aged 50 or older) constituting approximately 40 percent of the care workforce (Hussein, 2010). Participation in care

work also appears to start at a later age. Over half of care workers usually do not start working in the adult social care sector until they are 30 or older, suggesting an initial attraction for older workers to care work, which might not be similar for younger care workers (Eborall & Griffiths, 2008).

In the United States (US), being older has been noted as a predictor of job satisfaction among home care workers (Feldman, 1997). Rix (2001) explained this finding as the coupling between what service users want and what older care workers have to offer: experience, maturity, dependability, courtesy, honesty and kindness. In exploratory interviews with several care worker aged over 55 on the subject of caring for older adults, most felt care work gave them autonomy and that they liked working in an environment that centred on caring relationships, which they also regarded themselves as skilled in performing (Butler, 2009). The high proportion of older care workers, and the potential associations between age and preference for care work, intimates possible age-related motivations for entering and remaining in care work. However, research is needed to tease out such a relationship and to explicitly explore the relationship between age and motivations for care work. There is the suggestion that older care workers might offer and gain different experiences from participating in care work.

Certain ethnic groups also appear to be over-represented in the care workforce in England. Black and Black British care workers make up 9 percent of the care workers employed in England (Skills for Care, 2012), a proportion that is approximately three times higher than the proportion of Black and Black British workers in the entire UK working population (Cangiano et al., 2009). The proportion of first generation immigrants working in care work appears higher than national averages, with some variation by region (ONS, 2006). Immigrants from mainly African and Asian countries appears the most likely to enter care work for employment. In a report produced on migrant care workers in ageing societies, the majority of non-UK born care workers between 1999 and 2009, mainly came from: Poland, Zimbabwe, the Philippines, Nigeria and India; and were mostly based in London (Cangiano et al., 2009). Trends in ethnicity and nationality towards care work may imply cultural preferences for particular features of care work, or specific conditions of employment in care work, which may suit certain ethnic groups over others. Research summarised in the following subsection puts forward some possible explanations for the high portion of

individuals from particular ethnic groups in care work, however these studies offer conjecture rather than a definitive explanation.

2.2.3. Care Worker Experiences and Motivations

Consistent trends in the demography of care workers could be linked to the experiences of certain individuals in care work, which may motivate them to remain in or leave care work for other occupations (Feldman, 1997; Rix, 2001; Skills for Care, 2008). Much of the research on the experiences care workers have of participating in care work focus on the negative aspects of care work, partly in response to the high turnover and poor recruitment in the care sector. Research directed towards understanding why care workers leave the occupation, as opposed to why they stay, remains predominant. Most of the studies are survey data on intention to leave, or follow-up surveys of those that left the work voluntarily (Morris, 2009). A smaller, yet promising, body of literature on job satisfaction in care work, and evidence for the potential formation of emotional relationships, offer possible avenues for understanding the positive aspects of care work. The positive experiences, and reasons for deciding to engage in care work in the first instance, have the potential to serve as motives for choosing to remain in care work. The negative and positive aspects of care workers' experiences are often identified in the same studies, although greater emphasis regularly gets given to the negative aspects of care work. In this subsection, both are presented, with findings mainly originating from the UK and the US, although relevant findings from other countries are also discussed. Most of the studies from the US were based on cross-sectional surveys of care workers' intentions to leave in localised areas (Brannon et al., 2007; Butler et al., 2010; Kemper et al., 2008; Morris, 2009), whereas those from the UK and elsewhere were usually smaller structured or semi-structured interview studies, focused on the experiences of a specific group of care workers (Ayalon, 2009; Leece, 2006; McGregor, 2007).

According to Butler (2009), care work is generally regarded by the public as physically and emotionally challenging work, devalued by society, and lacking in both pay and reasonable benefits. Studies in the US examined the main reasons why care workers left the occupation (Butler et al; 2010), noting motives grounded in three key incentives: poor pay and hours for effort involved; personal reasons such as family commitments

and health; or as the result of burnout brought on by a service user passing away, miscommunication with care agency, incompatible role expectations, or a complaint being made by a family member of a service user.

Concern for these negative aspects of the care work experience has spurred studies investigating the causes of stress for direct care workers, and the methods applied to cope with these stressors (Bartoldus, Gillery & Sturges, 1989; Ejaz et al, 2008; Kemper et al; 2008). Low pay and insufficient benefits, poor organisational characteristics, as well as poor relationships with management and colleagues have often been cited by care workers as aspects that needed to be improved to increase job satisfaction and reduce turnover (Ejaz et al, 2008; Kemper et al; 2008; Morris, 2009; Purk & Lindsey, 2006). Despite the concern of elevated stress (Balloch et al., 1998), measures of stress indicated relatively low levels amongst care workers (Bartoldus, Gillery & Sturges, 1989). The authors of this finding concluded that strategies defined as 'denial', 'altruistic motives' and 'trying to identify with service users' were being employed by these care workers to cope with these issues, in order to reduce their stress (Bartoldus, Gillery & Sturges, 1989). Conversely, it is entirely possible that the reported low stress levels might actually be a response to positive experiences and enjoyable aspects of care work, and not just the consequence of coping strategies.

Care workers may actually identify with service users and may prefer to focus on the positive experiences in their work. In the US, Morris (2009) found that it was the non-financial rewards and improved conditions of work that reduced intentions to leave care work. This was further supported by findings on job perceptions and intentions to leave care work, which were reduced if care workers had positive appraisals from their supervisors, and personally considered helping others to be a valuable occupation (Brannon et al., 2007).

In order to fill the vacancies in the care workforce, first generation immigrants, as evidenced in the previous subsections of this review (ONS, 2006), were frequently recruited. This was often because they were perceived as hard-workers, with a good work ethic, accommodating, agreeable, and caring in their approach with elderly service users (Hussein et al., 2011). However, migrant care workers were also more likely to experience discrimination and racism from service users, their colleagues, and their

employers (Steven et al., 2012). In interviews on the perceived advantages and challenges of employing immigrants as care workers in the UK, employers and managers raised the issues of racist language used towards migrant care workers, and negative attitudes and discrimination experienced by care workers from their service users (Cangiano et al, 2009). These experiences were unlikely to motivate migrants to want to remain in care work, a finding supported by McGregor's (2007) research on the negative experiences of Zimbabwean care workers in the UK. Their experiences were epitomised by views of care work as 'demeaning', 'shameful' and 'dirty work'.

From the perspective of migrant care workers, if the work is characterised by poor pay and negative experiences it is unclear what motivates them to remain in the occupation. A recent review on migrant care worker experiences in Australia showed limited evidence of greater marginalisation amongst care workers in comparison to immigrants working in other occupations (Howe, 2009). In addition, a study conducted in Ireland found that the experiences of care workers differed between those from Europe, South Asia and Africa (Doyle & Timonen, 2009). Although all found the work demanding and demoralising at times, the flexibility and development of close interpersonal relationships with service users, as well as gaining a secure income, were appreciated. European care workers interviewed were aware of a lack of recognition for their work, but the high personal contact and working in a health care setting compensated for this. The Filipino care workers interviewed compared the bonds developed in care work to those experienced with older relatives, and this appeared to provide a source of pleasure and personal meaning for them in their care work. The African care workers interviewed experienced the most negative treatment from service users, other staff and managers. Over time however, these negative encounters seemed to dissipate. Those with negative experiences were also the most likely to talk about the positive aspects, and to appreciate the development of intimate relationships in care work. African care workers were also more likely to report feeling that they were compensating for the lack of care given to the service users by family members, who were perceived by some as neglecting their care responsibility to their family members (Doyle & Timonen, 2009; McGregor, 2007).

Doyle and Timonen (2009) interpreted the importance migrant care workers placed on the relationship formed in care work as evidence of a *care contract*, where essential care

to service users was reciprocated with friendship, advice and companionship for care workers, who may or may not have a support network of family and friends in close proximity. Ayalon (2009) found a similar relationship to Doyle and Timonen (2009), but in this case between Filipino care workers providing domestic, social and emotional care to Israelis in a live-in capacity. Although the social care and emotional care provided were not a defined aspect of the job description in this study, most of the 29 care worker interviews found that they were providing a substantial proportion of this intimate type of care. The author specified that family-like interactions can blur the boundaries between professional care and the personal desire to care. The Filipino care workers spoke about the patience and understanding required in the role, even in carrying out the domestic aspects of their work. The blurring of boundaries tended to result from additional tasks, not set out in the care plan, being carried out by live-in care workers. When social and emotional care was evoked, references were made to love and to other emotional aspects of care amongst the migrant care workers. They often reported becoming involved in the emotional duties of care, which were considered within the realm of the family and not the role of the care worker (Aronson & Neysmith, 1996).

Some consider the family-like relationship in care work and the blurring of boundaries as potentially negative experiences for care workers. Care workers provide care in a domestic context, like nannies and maids, and as a result are considered by Ayalon (2009) as part of the family in only a very limited way. By providing a service that is sourced from outside of the family, they are considered as not fully integrated into the family, but have instead a relationship of mutual dependency with the family, like nannies and maids (Ehrenreich & Hochschild, 2003).

Others have gone so far as to suggest that the relationship between care workers and service users might well be the main cause for negative experiences in care work. It has been suggested that the imbalance in care relationships between care workers and service users, in terms of a greater emotional investment by the care worker in the relationship, has contributed to the increased risk of burnout in care workers (Noelker, 2001). Schaufeli and colleagues (1996) have argued that reciprocity was required at the organisation level and at the interpersonal relationship level to reduce burnout, with others reporting evidence of an association between lack of reciprocity between care

workers and service users, and burnout (Thomas & Rose, 2009). Care workers with a lack of support from their organisation and colleagues, as well as younger care workers, were more likely to report emotional exhaustion and depersonalisation (Duffy et al., 2009), as features of burnout (Maslach, 1982). Duffy and colleagues (2009) have suggested that those working in the care of older adults with dementia were more vulnerable to burnout, where the work can often feel emotionally overwhelming and one-sided.

When emotional exhaustion leads to care workers becoming emotionally dissociated from service users, as a means to cope with negative emotions and challenging behaviour, this can cause problems for both the care worker and the service user. Depleted engagement at a personal and emotional level in the service user will ultimately leave care workers feeling a lack of achievement and confidence in their ability to perform their job. This can bring about poor quality of care for service users and a negative experience of the care relationship for both parties. The impact this has for the quality of the care provided has justifiably concerned researchers and service managers, and has driven the focus to understanding and resolving the emotionally demanding aspects of the relationships formed in care work. Family-like relationships in care work can be emotionally demanding, but an approach that views these relationships as purely negative neglects to consider the significance and satisfaction care workers derive from their relationships with service users. Understanding the relationships in care work as merely a source of emotional exhaustion, somewhat undermines the significance care workers themselves place on the bonds formed with service users and their families. Despite the stressful and negative experiences in care work, satisfaction in the work came from being appreciated by service users and improving conditions for them (Balloch et al., 1998).

Care workers providing concentrated personal assistance to one service user, as opposed to providing care for multiple service users, reported greater satisfaction in their work, even when the conditions of employment are comparatively better in the care of multiple service users (Leece, 2006). Such a finding indicates greater satisfaction obtained from intensive one-to-one care relationships. These concentrated dyads are more likely to blur the boundary between friend and the person employed to provide the personal care required (Manthorpe et al., 2010). Indeed, the service users in these

dyadic relationships are also likely to describe their relationship with their care worker as a friendship or family-like relationship (Leece, 2006).

These family-like and friend-like interactions can provide a source of pleasure and personally meaningful experiences for care workers, which may in turn serve as motives for choosing to remain in care work. Based on interviews and observations in two care services in the US, Ball and colleagues (2009) propose that it is the close family-like attachments that can develop between care workers and elderly service users that can make care work a consequential occupation, furnishing the care worker with feelings of personal gratification. Interviews with service users' families and their care workers in the US suggested that the friendship formed through care work is mutually experienced and understood (Piercy, 2000).

The positive experiences in care work can also be extended to relationships formed with the service user's family. In a study conducted in the US, affirmation from service users' families on the role and importance of assistance being provided to the service user was considered important for a positive experience of care work (Kemp et al, 2009). A lack of confirmation from family members of their work in maintaining the health of the service user left care workers feeling frustrated and undervalued. Evidently, it is the development of these amenable personal relationships that are likely to be a source of motivation and satisfaction in paid care work for both the care worker and the service user. Focus should be redirected to the aspects of satisfaction in care to identify motives for remaining in care work. Those that benefit from the emotional or other rewards of care work are more likely to be motivated to remain in care work.

Research in the UK with community based dementia care workers identified areas of satisfaction gained from care work (Ryan et al., 2004). Feelings of satisfaction were enhanced by supportive employers, autonomy in work, the emotional responsibility for service users, building rapport with service users, and communicating with service users and their family carers. In addition to these aspects, the broader feeling of making a contribution to someone's quality of life, improving conditions, and achieving positive outcomes were all considered important to satisfaction at work. A survey of over two thousand care workers in England (McClimont & Grove, 2004) found care workers ranked enjoyment in helping people, and a liking for the caring aspect of the work as the

important factors for choosing care work. The relationship with service users and having good managers became more salient once they became care workers. Career progression and avenues into other care pathway became more important for younger care workers, but this mattered less with age.

Satisfaction from care work is multifaceted and provides ample scope to investigate the motivational factors for engaging in care work. When care workers were surveyed about their motivation for choosing care work, enjoyment gained from providing care and previous experiences of working with other people both arose, and were the most frequent reasons given for deciding to engage in care work. In terms of satisfaction gained from care work, most specified enjoyment in meeting and helping people. Reflecting on the parts most disliked in care work, most listed the cleaning aspects of personal care, difficult and aggressive behaviour from service users, and the death of service users as the most disliked aspects to the job (Hall & Wreford, 2007). A similar picture was presented in residential care, where contact with service users and the responsibility of the caring relationship where regarded as the most emotionally satisfying aspects of the work, with abuse and unpaid overtime as the most dissatisfying aspects (Penna et al., 1995).

Findings from the job satisfaction literature indicated differential motivations for choosing to engage and remain in care work. Motivations appeared to change during the transition from deciding to engage in care work to actively participating in care work. Variations by age and by nationality in terms of aspects most enjoyed and preferred in care work were also apparent in the literature, as were variations in the aspects most disliked in care work and the extent to which experiences were generally negative.

Participation in care work may have the potential to increase the risk of stress, abuse, aggression, and negative emotions leading to burnout. All of these are aspects that might dissuade individuals from entering work and persuade those in care work to leave, but the evidence from the US on reasons for leaving care work are mixed (Brannon et al., 2007; Butler et al; 2010; Morris, 2009) and direct attention away from the reasons why care workers choose to remain in care work.

High turnover is neither inevitable nor intractable, especially when care workers report meaning in their work. Value should be attributed to what care workers think matters and gives meaning to their role (Rhodes & McFarland, 2000). The forging of relationships with service users and their families and contributing to improved quality of life seem to matter to care workers (Ball et al., 2009; Balloch et al., 1998; McClimont & Grove, 2004; Ryan et al., 2004), as well as other experiences considered favourably in the job satisfaction literature (Hall & Wreford, 2007; Penna et al., 1996). Care work is not regarded by the care workers interviewed in various studies as unequivocally a 'bad' job (Ayalon, 2009; Doyle & Timonen, 2009), a point that is further evident from those that chose to remain in care work.

Expectations about the work were based on previous experiences and satisfaction gained from aspects intrinsic in care work. Care work holds distinctive rewards that essentially need to be understood, if attempts are to be made to maintain motivated and satisfied care workers (Martin, 2007). Many care workers remain in care despite the demanding and often challenging nature of the work. It is these individuals that are best placed to explain their motivations for choosing and remaining in care work.

The research from the job satisfaction literature in care work has presented avenues for understanding what could potentially motivate individuals to engage and remain in care work. Variation by demography and situational factors may also be linked to motivations for choosing to engage and remain in care work. However, there is less available evidence for this in the literature on care worker experiences than there is in the NMDS-SC dataset findings (Hussein, 2009, 2010, 2011b; Skills for Care, 2007). The focus of the literature to date has been to identify general reasons for entering or leaving care work, mainly the latter, with a body of literature exploring the experiences of migrants care worker from various countries.

In order to fully understand how aspects such as sex, age, ethnicity, nationality, personal experiences and the formulations of emotional relationships may interplay to motivate individuals to choose and remain in care work, consideration should be given to the theoretical approaches identified in the care work literature. The next section reviews these theoretical approaches and highlights their lack of suitability for ascertaining the underlying motives that cause certain individuals to participate in care work.

Essentially, these theoretical approaches are limited by their approach to societal and economic level assessments of the occurrence of care work. They discount the individual experience and motivations for participating in care work at the psychological level.

2.3. Theoretical Approaches for Understanding Paid Care Work and their Limitations for Understanding Paid Care Workers

Care work has largely been discussed in sociological terms as emotional labour, despite the extensive physical aspects of the work. Emotional labour refers to any labour or work preformed that entails the manipulation and expression of emotions (Hochschild, 1983), where workers are implicitly expected to apply their 'emotional selves' to their work in ways beyond their job descriptions, typically uncompensated, and devalued in the work. Guy and Newman (2004) have gone on to suggest that emotional labour is often thought of as 'women's work' or the 'natural work' that women are expected to do (Aronson, 1992) outside of labour markets. Caring, along with empathising, negotiating, smoothing troubled relationships, and other behaviours are concealed 'behind the scenes' in the work, but clearly facilitate cooperation and are required elements in the many aspects of the work women do without recognition (Guy & Newman, 2004; Hochschild, 1983). Paid care work has been viewed by some as an aspect of emotional labour, as it fits the model of a large proportion of women participating and performing social and emotional care tasks that are concealed in job descriptions, but are expected behaviours in the work (Ayalon, 2009).

Observing the relationship between women and the skills essential to providing care and easing cooperation, should have been a springboard for theory-driven approaches to understanding preferences and motivations for engaging in care work in a labour market context, particularly by women. Instead, the focus has been on the devalued natural skills of women verses the market value given to the natural skills of men in 'men's work' (Ehrenreich & Hochschild, 2003; Guy & Newman, 2004). Emotional labour, and especially women providing emotional labour, has spurred theories on the influence of the commodification (Claassen, 2011) and the commercialisation of care (Hochschild, 1983). Here, the arena of the 'paid' aspect of the care has been the focus for theories

about the emotional harm caused by devaluing the intrinsic caring motives of care workers with poor pay (England, 2005, for review).

The motivations of care workers have been narrowly viewed as something that is impacted on by markets, through the introduction of payment for the care of dependents in the population from children to older adults (Claassen, 2011). Others have contested the opinion that the motivational aspect, the moral bonds, of good quality care are effectively corrupted by the introduction of payment and the 'work' aspect of the care (England, 2005; England & Folbre, 1999; Folbre & Nelson, 2000; Meagher, 2006). The role of a paid care worker involves the practical aspects of caring *for* the personal and domestic needs of the service user, however the role also requires caring *about* the emotional and social needs of service users too (e.g. Ayalon, 2009; Leece, 2006; Ryan et al., 2004).

According to Meagher (2006), the care 'for' and the care 'about' aspects of paid care in many respects are not that dissimilar from the manner in which care is provided within family relationships. Both the activity of providing care, and the emotion of caring, have been seen as analogous to the care seen in family relationships and in friendships, from both the service user and care worker perspective (Ryan et al., 2004; Stone, 2000). Although Meagher (2006) has pointed out that whilst those relationships between family members have time for care bonds to form, care workers may not always have the opportunity to develop the caring *about* bonds in the same way. For care workers the professional duty of care is the necessity; the compassionate gift of care may not always follow.

Much of the emotional labour literature that has shifted theories of care work to focus on devalued aspects of care, and the gendered nature of care work has neglected the relationship aspect that is central to care. Himmelweit (1999), a feminist economist, has argued that much of the emotional labour literature does not apply to care work, which is unique in the relationships and continued care bonds that form between care workers and recipients. Emotional labour refers more to unidimensional interactions where a stranger is served by the worker, based on the examples cited by Hochschild (1983). Himmelweit (1999) purports that the activity of and motivation to care comes from a relationship being developed between the individual care worker and the recipient:

> *"Furthermore, a carer's identity and motivation are created and developed by her relationship with her caree. Even when caring is initiated in response to wider social expectations, as time goes on the relationship will develop its own specific obligation and dependencies."* (p.30)

Support for the continuity of a caring relationship as the motivation for remaining in care work has been given by others, with regular examples of paid care workers forming attachments with service users and extending their care responsibility out of contacted hours (Aronson & Neysmith, 1996), or a reluctance to change service users once bonds are formed (Challis & Davis, 1986). The relationship has been identified among care workers as a reason for remaining in care work (McClimont & Grove, 2004), but this does not explain the motivations for choosing care work in the first place. The formulation of relationships comes after engagement in care work, but people choose their jobs to some degree and are not allocated to them. By shifting away from the position of care work as fully commodified, to the relationship central in the work, Himmelweit (1999) has considered motivations beyond the monetary and societal for remaining in care work. There is still however, lack of an appropriate theory for engaging in care work in the first place, before the bonds are formed, other than societal expectations of women's role in care work. The focus on women in care work also neglects the approximately 15 percent of men that choose care work over other occupations available to them (Hussein, 2009).

Attempts to theorise care work have been limited to accounts focusing on specific facets of care work, which have been separated out as: concerns about the paid aspect of the work and the effect this may have on the care relationship; the emotional aspects of work; and the physical act of providing care. The paid aspect should not be discounted; neither should it be the sole medium by which care worker motivations are assessed. The explanations of care work as emotional labour also demarcates and overlooks the very practical physical aspects of the work. A theory is needed that combines the motivation to care *for* someone in a practical sense, the consequence of caring *about* someone in an emotional sense, and the willingness to do this in a paid context.

Currently, no theory has attempted to encompass all three aspect of paid care work. In addition, initial motivations to choose care work over other equally viable occupations needs to be considered in relation to the rewards, relationships and carer identity that develop and influence the decision to remain in care work. It is conceivable to distinguish between these two stages, decision to engage in and decision to remain in care work, but a theory of care work should also acknowledge the relationship between the two.

There needs to be a shift not only in the amount of research done on care work, but also in perspective. Much of the previous research has focussed on job dissatisfaction and the undesirable aspects of care work, as reviewed in the previous section, with the assumption that addressing the negative aspects will improve job satisfaction and retention in the sector. It is imperative at this stage to concede that care workers face difficult circumstances in their work. This is somewhat inherent when the work requires the formation of a compassionate relationship with the service user. Care services are provided to those most in need, which can often mean dealing with distressing situations, such as providing intimate personal and social care to terminally ill service users. This can often be emotionally challenging and upsetting, but is inherent and unlikely to change. Other health and social care professionals may face similar challenges in their work, which may be compensated unlike care workers with material rewards, such as higher pay or social status. Care workers are aware of the negative aspects of their work, including poor pay and conditions, but those that enter and choose to remain do so regardless, with evidence to suggest that intentions to leave may not necessarily be related to poor pay or conditions of employment (Brannon et al., 2007; Morris, 2009)

A theory-driven approach is needed that is directed towards the more positive aspects of the work and the factors that motivate individuals to engage and remain in care work. Research on the negative aspects of care work have evoked theories that focus on the perceived socialisation of women as the care givers within a society, with the implication that this leads to exploitation and the devaluation of care work and women more generally by labour markets (Guy & Newman, 2004; Hochschild, 1983). Greater recognition is needed on the core aspect of the work, the care aspect. Combining motives to care *for* someone in a practical sense, with the consequence of caring *about*

someone in an emotional sense, and doing it for a relatively low wage. Previous approaches do little to explain why individuals, and many women for that matter, choose to participate in care work over the other occupations available to them. These largely feminist economic and sociological accounts of care work have neglected the psychological aspects of care work and the instinctive aspects of care behaviours more generally. The 'natural' aspects of care giving and the greater female preference for care work may be indicative of something other than the socialisation of women to work in certain occupations. What this may be suggestive of is explored further in 2.6.4 of this chapter.

Clearly, a level of information is known about what potentially motivates participation in care work. In a large survey of care workers, enjoyment in helping people and liking care work were ranked as the most important factors for choosing care work (McClimont & Grove, 2004). Theory and corresponding research questions are required to explore where the enjoyment and preference for helping people comes from, and who may possess such inclinations towards enjoyment in care work. The emphasis should be to investigate the individual differences of those participating in care work, and highlight the characteristics that are likely to be associated with wanting to engage in care-giving behaviours. It is likely that these characteristics may potentially influence whether one experiences satisfaction from social care work, or not, which will ultimately impact on the quality of the care provided.

Commonalties noted among care workers are the starting points for making predictions about why individuals decide to engage and remain in care work. The rest of this review will utilise theory from evolutionary psychology to make suggestions about the nature of care giving and the relationship between personality, demography, and the local environment that influence the motivations and decisions to engage in care-giving behaviours. But first, a theoretical approach that underpins our understanding of the evolutionary origins and function of behaviour will be introduced as the framework for understanding causality in relation to behaviour, within this thesis.

2.4. A Different Theoretical Approach to Understanding Human Behaviour, Decisions and Motivations

2.4.1. Understanding the Causes of Behaviour

In the process of integrating discoveries in the transfer of genetic information with Darwinian theories of evolution and natural selection, Mayr (1961) specified the distinction between the ultimate and proximate causes of behaviours, and how these could be applied to understanding behaviour. To fully understand the causes of any behaviour, both the ultimate 'why' and the proximate 'how' need to be established in order to explain past events, predict future events, and to understand goal-directed phenomena. The example he gave was one of bird migration, where the causes were identified as either ultimate or proximate. He listed four equally valid causes for migration behaviour in birds: (i) that they may do so for to an ecological cause, such as lack of food during the winter months, which would result in starvation if they remained; (ii) a genetic cause, such as an inherited trait that is induced in response to specific environmental cues at specific time points in specified ways; (iii) an intrinsic physiological cause, with shorter periods of daylight inciting a readiness to migrate; and (iv) an extrinsic physiological response, such as a cold day and a sudden change in weather conditions that incite the already physiologically primed bird to migrate on that exact day.

Mayr (1961) viewed the first two causes as ultimate causes, the evolutionary history and function of a particular feature in terms of selective advantage. Why the feature appears as it currently does is the result of natural selection, and the effect it has on the inclusive fitness of the individual that carries out the particular behaviour. The latter two causes provide the proximate causes of this particular behaviour. They provide a description of how this behaviour comes into immediate effect, the mechanisms that respond to internal and external cues. Taking Mayr's considerations of causality, he states that there is always an ultimate set and a proximate set of causes underlying any given phenomenon. To fully understand a specified behaviour, both have to be explained and interpreted. It is this complete approach to understanding behaviour that forms the basis

of evolutionary approaches in the behavioural sciences, one of which is evolutionary psychology.

2.4.2. Evolutionary Psychology

Evolutionary psychology is a meta-theoretical framework for understanding the design of psychological adaptations and the influence these have on human behaviour in contemporary environments (Barkow et al, 1992; Buss, 1995, 2005; Dunbar & Barrett, 2007a; Pinker, 2002; Tooby & Cosmides, 1990a; Tooby & Cosmides, 2005). It takes a functional view of human behaviour, in which current behaviour is the consequence of evolved psychological adaptations, responding to information obtained from the environment. This neo-Darwinian approach to understanding behaviour in human and non-human species was based on the principles of Darwinian fitness and the differential survival of genes, as defined in Dawkins' (1982) fourth definition of fitness, which encompassed inclusive fitness. These psychological adaptations, whether cognitive mechanisms or traits, are considered the consequence of an evolutionary history by natural selection, and were selected for because they solved common ancestral problems and ultimately maximised inclusive fitness by addressing them (Barkow et al, 1992). Therefore, individuals should behave as if they were designed over their lifetime to maximise their genetic fitness (Grafen, 2006).

In reality, these cognitive mechanisms may not always appear perfectly designed to optimise fitness in contemporary environments, with environmental changes occurring at a faster pace than natural selection, the adaptive significance may not always be apparent in contemporary environments and behaviours (Tooby & Cosmides, 1992). However, this process of design to maximise inclusive fitness has endowed humans with species-typical psychological adaptations that are universal and enduring, despite the observable variations in local environments (Buss, 1995; Tooby & Cosmides, 2005).

Furthermore, this view of evolved cognitive mechanisms influencing behaviour does not entail that hard-wired solutions are directed to optimise certain behaviours, irrespective of individual conditions and local variations. On the contrary, there is considerable variation between and within cultures and individuals in the manifestation of how cognitive mechanisms and traits are directed in behaviour at the individual level.

The evolved response in any given situation is therefore contingent on several factors, as aptly depicted in Mayr's (1961) example of the migratory behaviour in birds.

Observed variations in behaviour have been attributed to default cognitive capabilities that allow humans to calibrate behaviours to the environments they find themselves in (Dunbar & Barrett, 2007b; Tooby & Cosmides, 1992). As a consequence, no sole behavioural strategy should be expressed in all situations. Psychological adaptations have favoured flexibility in selecting the appropriate behavioural strategy to take, which will differ even in the lifetime of the individual, and will be activated by current survival and reproductive goals, past experiences and local environments (Kaplan & Gangestad, 2005; Tooby & Cosmides, 1992).

2.4.3. Advantages of an Evolutionary Approach

An evolutionary approach adds an extra explanatory level to understanding human behaviour. It allows *why* questions to be asked about the fitness benefits (ultimate causation) of common behavioural strategies within a given population, and their adaptive function, something which is continually absent from other psychological accounts of human behaviour (Nettle, 2009). As well as endowing ultimate explanations for behaviours, evolutionary psychology allows questions to be asked about *how* these fitness benefits are delivered, in terms of social, psychological and physiological mechanisms, to understand the proximate causation of behaviours (Scott-Phillips et al. 2011).

To understand motivations for engagement in paid care work, starting with a defined view of human nature such as fitness maximising over a lifetime, evolutionary models are better equipped than other models that do not consider that socialisation and learning have an evolutionary history shaped by selection pressures (Somit & Peterson, 2003a). Evolutionary models for understanding behaviour do not preclude malleability and cultural influence. Proximate causes for initiating behaviours can be social without refuting the existence of a biological basis (Nettle, 2009).

What an evolutionary model of human behaviour offers is a theoretical approach that understands why and how behaviours arise; this is crucial for understanding any human

decision making process, and the suitability of any particular policy aimed at altering a particular behaviour in some way. By only addressing the *how*, and not the *why*, behavioural interventions can fall short in their attempts to modify, limit or encourage certain behaviours (Crawford & Salmon, 2004; Dickins et al., 2012; Johns et al., 2011; Peterson, 2008; Somit & Peterson, 2003b).

To understand motivations for engaging and remaining in paid care work within this theoretical framework, the why and how need to be addressed. First, there is a need to identify the adaptations that were selected for in our ancestors that would be relevant for explaining paid care giving in contemporary contexts. Based on the basic assumption that the care worker and service user relationship is at least a cooperative exchange of money for care, although the literature suggests care workers gain more from the interaction than this (Ball et al., 2009; Hall & Wreford, 2007; Himmelweit, 1999; Leece, 2006; McClimont & Grove, 2004; Meagher, 2006; Ryan et al., 2004), a suitable adaptation is likely to be one of mutual benefit to the care worker, as well as the care recipient. Second, the proximate social, psychological and physiological mechanisms enabling this adaptation need to be identified to explain how individuals engaging in care work behaviours in contemporary contexts derive benefits from this behaviour. To address the first point, this thesis argues that the adaptation most suitable for addressing the ultimate cause is the evolution of cooperation in humans. The proximate causes enabling cooperative behaviours are likely to feature mechanisms such as empathy. The rest of this chapter will unravel the ultimate and proximate mechanisms predicted to be relevant to occupational care giving in contemporary contexts.

2.5. Evolution of Cooperation and the Proximate Mechanisms to Deliver Care

2.5.1. Evolution of Cooperation

In *The Descent of Man* Darwin (1871) argued that mutual assistance and the moral senses noted in humans, as well as other species, were maintained through shared benefits between individuals living in cooperative groups. He went on to note that social animals can also mutually defect from such cooperative encounters, raising lines of enquiry into the functional nature of social behaviours and specifically cooperation.

In evolutionary terms, behaviours are regarded as social if they have fitness consequences for the actor performing the behaviour and for another individual, usually referred to as the recipient (West at al., 2007a, 2007b). Taking the Hamiltonian classification of social behaviours in relation to fitness costs and benefits (Hamilton, 1964, 1970), West and colleagues (2007b) identified and labelled four possible types of social behaviour with lifetime and absolute fitness consequences. If the actor performing the behaviour (*a*) and recipient (*r*) both benefit from the social behaviour, the behaviour is regarded as of mutual benefit (*a* +, *r* +), if the recipient benefits, but at the cost of the actor, this behaviour it then regarded as altruism (*a* -, *r* +). It is these two types of social behaviours that are generally considered as cooperation. Although other terms are used in the literature (i.e. reciprocal altruism), they generally amount to the same beneficial payoff for the recipient, thus making them cooperative. The other two types of social behaviour are regarded as selfishness and spite: if the actor benefits and the recipient does not (*a* +, *r* -) this is regarded as selfishness, or if the actor and recipient both pay a cost as a consequence of the behaviour (*a* -, *r* -) the behaviour is considered as spite. For this thesis, it is the evolutionary origins of these cooperative social behaviours that are of primary interest.

To understand why cooperation was selected for and remains ubiquitous in human populations, an argument needs to be formulated at the unit of selection, the gene level (Mayr, 1961). According to selfish gene theory (Dawkins, 1989), benefits bestowed should be at this level of selection. By taking a gene-centred view of selection, individuals act as the medium by which genes interact with other individuals and the environment. Therefore, genes can only be as successful as the average of the individuals they find themselves in (Maynard Smith, 1989). This does not entail that individuals need to behave in selfish ways, but is does bring into question how cooperative behavioural strategies could have evolved in a world of selfish genes.

Kin selection (Hamilton, 1964) could explain the spread of the 'helping gene', or altruistic behaviours, through inclusive fitness theory. In essence, one can ensure that there is a high probability that copies of one's genes are available in current and subsequent generations. Therefore, helping and care giving observed between individual members of a family could be explained by kin directed altruism which benefits indirect fitness, by ensuring fellow carriers of the same genes survive and

reproduce. Hamilton noted that the spread of a helping gene could be achieved if the product of the coefficient of relatedness and benefit to the recipient of the help was greater than the cost to the donor. The coefficient of relatedness (*r*) concerns the probability, over average population frequency, that two individuals share the same gene. For example, in humans, the *r* between siblings from unrelated parents is 0.5. Hamilton's Rule states that a behaviour or trait will be favoured by selection when *r* and the fitness benefit (*B*) to the recipient is greater than the cost (*C*) to donor ($rB > C$). In other words, selection favours the gene if $rB - C > 0$. Cooperative behaviours that help kin, ensures greater fitness benefits to the individual at the gene level, by permitting copies of the gene to survive and replicate in others.

Hamilton (1964)'s theory of kin selection adequately explained the evolution of cooperation, and even altruism between genetically-related individuals to varying degrees. However, it did not account for the evolution of cooperation between unrelated individuals. The probability of an unrelated individual carrying the same genes as the donor is significantly reduced, thus reducing the indirect fitness benefits to be gained from helping an unrelated individual. Cooperation between unrelated individuals must, in the most part, transmit direct fitness benefits to the actor for this strategy to successfully populate human societies. Cooperation could have evolved due to direct or indirect fitness benefits or both, although direct benefits are likely to increase in importance once cooperation has already favoured the indirect benefits (West et al., 2011). One would expect a similar model to Hamilton's model of kin selection that gauges the fitness costs and benefits of helping another, but without the high degree of relatedness, which may be negligible depending on genetic viscosity within the population.

Trivers (1971) suggested such a model for explaining the evolution of cooperation between unrelated others, arguing that cooperation, as a form of reciprocal altruism, could occur between unrelated individuals. Whereas kin selection required confirmation of the same gene in another for help to be given, Trivers' theory of reciprocal altruism purported that help is given to unrelated others on the belief that this help will be returned at another point in time. Individuals will therefore provide help in turn, when the fitness costs for helping were relatively low to the donor and the fitness benefits for the recipient were relatively high in comparison.

Under these conditions, Trivers (1971) suggested that cooperation (referred to as 'reciprocal altruism') would evolve, even among unrelated individuals. He further specified that cheats, selfishness in the Hamiltonian classification (*a* +, *r* -), could penetrate these exchanges by accepting the assistance, without returning the gesture. This behavioural strategy of harming others' direct fitness, for personal fitness gains would be advantageous at the start. However, in time and in repeated interactions, they would be distinguished as adopting a selfish behavioural strategy and excluded from cooperative encounters. Instead, preference would be given to those that cooperate, and reciprocate the fitness benefit at another point in time. Over time, the delayed fitness returns to both parties in these reciprocal interactions, will form a mutually beneficial form of cooperation in Hamiltonian terms of fitness costs and benefits (West et al., 2007a; 2007b).

In addition, certain conditions were specified for when these mutually beneficial interactions would occur (Trivers, 1971): namely where there was a reasonable chance of meeting the unrelated individual again; where recognition of cooperative others and detection of cheaters was possible; and if the ratio of costs to the donor and benefits to the recipient were low, then help would be provided.

Axelrod and Hamilton (1981) attempted to model such social interactions between individuals to investigate how and when cooperation would become an Evolutionary Stable Strategy (ESS)[1] amongst a population of gene-centred individuals seeking to maximise their own fitness gains. They utilised the prisoners' dilemma payoff matrix that maximises returns to self in defection, but only if the other individual cooperates, to address this question in single-shot and tournament situations. In single-shot interactions, an individual adopting an 'always cooperate' strategy would be outcompeted by an 'always defect' strategy. A single defector could prosper in a population of cooperatives, and could even displace a population of always cooperate strategies, making it an ESS resistant to invasion. However, when parameters were changed to repeated interactions between pairs and different strategies that considered

[1] An ESS refers to a strategy governing behaviour that, if adopted by individuals in a population, is resistant to another strategy replacing it.

the previous moves of other players in the tournaments, mirroring real world encounters, cooperation became an ESS (Axelrod, 1984).

Axelrod (1984) concluded that effective strategies for when to cooperate took into account the other strategies in the environment. Making behaviour conditional on others was required, and cooperation could spread even when there was a low degree of relatedness. Strategies that were forgiving (retaliating against defection, but returning to cooperation when a partner does), more optimistic (never being the first to defect) and were not overly competitive (not striving for greater payoffs at the expense of others) tended to do better in tournaments. Stability of mutually beneficial cooperation also depended on opportunities for continued interactions, in order for help to be returned and to enable the monitoring of actual behaviours in others. Frequency of interactions promoted stable cooperation, suggesting that friendship was not necessary for the emergence of cooperation, but may have emerged as a by-product of it.

Once cooperation was established as an ESS, Trivers (1971) pointed out that direct encounters of mutual benefit were not necessary for cooperation to spread within a population. Most individuals can learn from the interactions of others, indirectly, and use this information in their interactions. Nowak & Sigmund (1998) modelled a computer program to show that cooperation can exist in non-repeated exchanges, as long as individuals are able to observe these cooperative encounters with others. Being observed in cooperative encounters with others can increase an individual's image score, which can result in observers giving assistance in future interactions: when the probability of knowing the image score (q) was greater than the ratio of cost to donor (C) and benefit to recipient (B), $q > C/B$.

In summary, cooperation evolved as an adaptation that increased fitness benefits to the recipient, but it was also selected for because it delivered direct fitness benefits (mutualistic cooperation) or indirect fitness benefits (altruistic cooperation by kin selection) to the donor (Hamilton, 1964, 1970; Grafen, 2006). It has been suggested that the direct fitness benefits have transpired as a by-product of cooperative encounters, or from enforcement mechanisms (Trivers, 1971), whereas indirect fitness benefits have emerged when the donor is genetically similar to the recipient through limited dispersal or kin discrimination (Gardner et al., 2009; West et al, 2007a, 2007b, West et al., 2011).

For this thesis, it is the direct fitness benefits that are of interest, since paid care workers provide help to unrelated others, fitness benefits must ensue from these cooperative encounters. Other occupations are available to choose from with comparable pay to care work. However, these occupations do not entail the same negative experiences (see section 1.3.4) and the potential personal cost associated with care work (see section 2.2.3). If other occupations are available for the same pay, but with better conditions of employment, individuals choosing to engage in care work must be gaining from benefits other than the pay. According to West and colleagues (2007a) direct fitness benefits can arise from mutually beneficial cooperation as an unconscious by-product of the 'self-interested' behaviour of the donor, and enforcement when the donor is rewarded or punished for their cooperation, or lack of cooperation respectively (West et al, 2007a). For example, shared interest in cooperation can provide benefits such as large group size, as has been noted in the cooperative breeding literature among other species, where additional group members can increase survival and foraging success (Clutton-Brock, 2002). If helping subordinates in the group can increase their status in the groups, selection for helping in rearing will also be favoured (Kokko et al, 2001).

Some have referred to the by-product of mutual aid as a form of interdependence, where an investment made in the welfare of others, gives them a stake in the welfare of those others, which has secondary outcomes for them (Roberts, 2005). It is important to note that indirect benefits, as well as direct benefits, can also be derived if the group includes relatives, although for the literature on cooperative breeding, direct fitness benefits seem to be more important. Helping others may evolve to avoid eviction or alienation from the group, often referred to as pay to stay, group augmentation can lower mortality or increase help to raise offspring, and observations of helping others can also increase social status as an honest signal of quality (Bergmüller et al; 2007; Griffin & West, 2002), comparable to image scoring in humans (Wedekind & Milinski, 2000). Indeed, humans too present an extensive willingness to help those in danger, share food and other resources, help those that are ill or wounded, provide care to the very old, or share tools and knowledge, all of which might appear at first glance as if they would limit the donor's direct fitness (Trivers, 1971).

Hanson (2007) argues that medical habits (such as the disproportional large provision of medical assistance given by states and firms, or in certain countries) and mutual help are linked to gaining status and allies in humans, with care given to an ally reassuring concern for their welfare, an account similar to that presented in the cooperative breeding literature (Griffin & West, 2002). Additionally, it would be advantageous for others to see that the donor paid a cost to distinguish themselves from those that either did not provide help, or were less dependable allies. Generous behaviour can be a useful reputational signal when seeking future cooperation from others. Experimental evidence suggests that individuals will compete in being the more generous when this could influence future decisions regarding partner choice for cooperative interactions (Barclay, 2004; Barclay & Willer, 2007).

Clearly, there is value in terms of fitness benefits to be had in having a number of reliable allies. Diversity in social allies also seems to be beneficial in terms of fitness gains. Cohen and Janicki-Deverts (2009) have reviewed the association noted between social networks and improved health. More and diverse social allies were associated with longevity, less cognitive decline, and better prognoses with limiting or life-threatening illnesses. Conversely, social ostracism has been documented under experimental conditions to lead to negative physiological effects (Gunnar et al., 2003; Moor et al., 2010), which are associated with poor health outcomes if experienced persistently over time (Wesselmann et al., 2012). Following on from this, it has been suggested that two separate factors might be involved in improving health and survival; a minimum threshold number of allies, and diversity within the network of social allies (Cohen & Janicki-Deverts, 2009).

The direct fitness benefits endowed from larger social networks, as evidenced in the group augmentation and social network literature, may be pertinent for understanding the large proportion of immigrants in care work (Cangiano et al, 2009; Skills for Care, 2012). Migration brings displacement from one's social network and the benefits entailed with belonging to a social group. Care work in the host country could serve as a feasible strategy to create a new, and more crucially a local, social network with the direct benefits that indebtedness from the care investment will bring. Doyle and Timonen (2009) in reference to a 'care contract' between migrant care workers and service users, suggest such benefits emerge from the cooperative alliance in care work.

From the available literature, sustained participation in care work presents as a mutually beneficial social interaction in terms of direct fitness benefits. Much of the previous literature has approached research into paid care as a costly behaviour (Bartoldus, et al; 1989; Ejaz et al, 2008; Kemper et al; 2008; Morris, 2009), one could even say altruistic in terms of fitness cost and benefits to the care worker, if the personal cost to the care worker is not offset by the pay (see sections 1.3.4 and 2.2.3). Examining paid care giving from this supposition has neglected the collaborative and mutually beneficial aspects of care work, a point that has been acknowledged by Doyle and Timonen (2009) from their interviews with care workers:

> *"Far from being presented to us as a unidirectional 'provision of care', the carer-care recipient relationship was described as a mutually rewarding relationship with high levels of reciprocity."* (p.342)

The paid aspect of the care work is an important feature to this behaviour, with personal benefits that differentiate it from voluntary care work. The money gained, despite being low in relative wage terms (as reviewed in Chapter 1), has fitness benefits in terms of providing essentials for survival such as food and shelter. This monetary benefit may potentially offset some of the costs given in devoting extra time and energy to the care of unrelated individuals. However, care workers are not just those in need of money. The demographic composition of the care workforce suggests preferences other than the willingness to work for a low wage in a low status job. The workforce is predominately poorly qualified, suggesting that status and other positional goods carry little value for those that choose to remain in care work. The low wage and status must be offset by other benefits, as individuals with limited qualifications and poor access to economic resources have other options for employment (e.g. positions in retail and manufacturing sectors). These assertions will be explored further in Chapter 4.

The specific demographic composition of care workers indicates the possibility that care work has value for certain individuals, over other individuals with similar socioeconomic status. What sets care work apart from these other occupations is the intense interpersonal contact, and this may be the source of the compensation. Immigrant workers with limited networks for emotional and social resources, a

particular consequence of the displacement associated with migration, may benefit greatly from the local knowledge, advice and social networks that emerge from the investment in care recipients (Doyle & Timonen, 2009). These benefits have real value, saving time and money that would otherwise be required to build these networks in other ways, and by other means. As females, and especially those with children, benefit more than males from cooperative social alliances (Hrdy, 2009), it is possible that key dispositional differences may contribute to the decision to become a care worker.

In taking a Darwinian view of economic behaviour, Frank (2011) noted that preferences may differ in numerous dimensions, and these may all have real consequences on fitness benefits. Frank gave the example of two such dispositions and how these would play out in selecting a job – attitude towards risk and the desire for money. The most cautious individuals with the least desire to earn a high wage, would be best placed in jobs where they can get the high safety they want, and as the desire to earn money does not overly concern them, they will accept this at a lower wage. At the other end, those individuals least wary of risk, but with the greatest desire for a higher wage, may be able to tolerate the additional risk in a job in order to maximise the wage. Individuals with less extreme tastes on these two facets will select work that entails intermediate values on both risk and income.

This same thinking could also be applied to the payoff structure in care work. The preference for care work, over other occupations, could be capturing individual preferences for forming social alliances, with the willingness to tolerate a low wage. The value gained from forming social alliances at work may offset the lower wage. Whereas, those in higher paid and higher status care professions may have a preference for higher wages, and will tolerate the lack of direct social contact at work to offset this. Their higher wages will probably afford them the time and money to seek social alliances, or the equivalent in fitness benefits, elsewhere. The unsociable hours and low pay in care work leaves little opportunity and resources (time and money) for forming social alliances outside of work. Care work may cater the formation of cooperative alliances that have real value in fitness terms. In summary, the hypothesised fitness benefits from mutual cooperation in care work are listed in Table 2.1.

Table 2.1. Hypothesised fitness benefits from mutual cooperation in care work

Direct Fitness Benefits of Mutual Cooperation	Hypothesised Gains from Engagement in Care Work	Evidence from Care Worker Literature Potentially Supporting Hypothesis
By-product benefit of larger social network and related benefits: • Increased social status • Avoid alienation • Gain supportive and reliable allies	Immigrants and others prone to social marginalisation or isolation may benefit from engagement in care work through diversifying or widening local social networks at work, and reduce investments made outside of work (if resources are limited). As a consequence of the relationships formed with service users, care workers and their dependents may gain from the alliances formed with service users and their families - interdependence from the investment in the welfare of service users.	Large proportion of immigrants in care work, and the implicit 'care contract' with service users: Cangiano et al. (2009) Doyle & Timonen (2009) Skills for Care (2012) Forging close relationships with service users and their families: Ball et al. (2009) Balloch et al. (1998) Leece et al. (2006) McClimont & Grove (2004) Piercy (2000) Ryan et al. (2004)
Financial benefit: • Direct fitness benefits from being able to buy food, housing etc	Care workers often poorly qualified so may lack other opportunities for financial gain. But care work is poorly paid, and other better paid opportunities are available. It is therefore possible that individuals with a preference for forming social relations may benefit from care work by gaining a social network they would otherwise have to pay for (in terms of time or money) elsewhere.	Enjoyment and satisfaction reported in the social and relational aspects of work, and desire to leave care work when these are not met: Hall & Wreford, 2007 McClimont & Grove (2004) Penna et al. (1995) Ryan et al. (2004)

How the fitness gains are obtained and maintained from mutually beneficial cooperation with care recipients requires a discussion of the proximate mechanisms. The next subsection identifies the social, psychological and physiological mechanisms that might have evolved to support cooperative behaviours in humans. This is by no means an exhaustive list, but it is likely that these mechanisms and traits will facilitate insight into what motivates individuals to engage in occupational care giving.

2.5.2. Proximate Mechanisms for Cooperation and Care

Mutualistic cooperation is ubiquitous in human behaviour and has adaptive significance, but subtle forms of cheating can also be adaptive in the world of co-operators. For this reason, psychological mechanisms have been selected for that enforce cooperation and detect the cooperative sensibilities of others, either directly, or through the experience of others (Axelrod & Hamilton, 1981; Trivers, 1971). Trivers (1985) advocated the position that cooperation was an imperative aspect of human evolution, one which has left its mark on our emotional systems to encourage mutualistic cooperation with others.

He suggested that emotions such as sympathy, moralist aggression and guilt, serve to enforce cooperation respectively by: motivating help; protecting and educating others to help; and encouraging reparative gestures to save cooperative alliances. A particular example given is the emotional rewards from friendships, which motivate us to help those we like, over those we dislike. However, feelings of friendship are not a foolproof mechanism to guarantee cooperation, as cheats can mimic friendship, sympathy, or any other emotional state to take advantage of a donor's generosity (Trivers, 1971).

In order to be able to detect subtle cheating and reliable cooperative partners, humans differ from other species in the mechanisms involved in deciding whether to engage in cooperative behaviour. In addition to emotional regulatory systems, cognitive mechanisms consciously and unconsciously weigh up the costs and benefits of cooperating and modify behaviour accordingly. This is partly to alter one's own help-giving behaviours, as well as being able to assess the cooperative intentions and behaviours of others (Fehr & Fischbacher, 2005; Fehr & Gächter, 2002). Assessing the trustworthiness of an individual's actions, and also being suspicious of inconsistent

actions, allows for such judgements to be made about the motivations and intentions of others to cooperate (Trivers, 1971).

Initial encounters with strangers require a certain degree of trust. Helping in an interaction with a stranger can signal the desire for a trustworthy mutually beneficial alliance to form, with the potential for friendship to be established as a by-product in some cases (Axelrod & Hamilton, 1981; Trivers, 1971). In an experimental behavioural game, individuals were more likely to use a 'raise the stakes strategy', i.e. donate more as the game went on, to a stranger in an iterated prisoner's dilemma, than they would to a friend. This tactic was said to increase cooperation with strangers, which differed from the strategy used with friends, where individuals tended to cooperate and donate more from the onset, and also overall (Majolo et al., 2006). Trivers (1971) suggested that the reassurance of generosity from a friend has a greater tendency to be taken for granted, indicating the greater trust placed in a friend to return benefits received from the alliance. For care workers, the instances where family-like or friend-like interactions form (Leece, 2006), may be more advantageous for both parties in terms of the generosity given. Familiarity extends the trust given to a partner in such a mutually cooperative relationship.

Human interactions tend to go beyond these dyadic encounters and often occur in the presence of, or including others. Multiparty interactions permit learning from the experiences of others, which necessitates a concern for the opinions and judgments of onlookers. Such an awareness of monitoring by others encourages the adoption of generalised rules, or norms, concerning what can be expected in terms of providing help in social exchanges, with suitable enforcement mechanisms policed by the available onlookers (Trivers 1971, 1985).

Cooperation in repeated public goods games have demonstrated that public rewards can act as incentives for maintaining mutual aid, and are as effective as punishment for enforcing public cooperation, resulting in higher earnings, contributions and payoffs (Rand et al., 2009). Substantiation for public enforcement as a proximate mechanism for mutual cooperation comes from research on neural imaging combined with behavioural games. This research has shown that the same reward-related circuits are activated by punishing those that do not cooperate, as were activated when engaging in

mutually cooperative encounters (Fehr & Rockenbach, 2004). This demonstrates the possibility of a similar reward system for mutual cooperation as for the punishment of those that do not cooperate.

Cognitive mechanisms that weigh up the reputational incentives are likely to be favoured in certain circumstances, when there is an intention, or need, to build a reputation with others. Donating to a well-known charitable organisation in public has been experimentally shown to increase benefits from members of one's own social group, as well as enhancing political reputation (Milinski et al, 2002). The donations made in this research were viewed as a cost paid by the donor, but to the benefit of signifying their social reliability to others. However, of particular relevance to this thesis, there is evidence to suggest that individuals motivated by mutually beneficial outcomes tend to pay less attention to reputational incentives than those with more self-serving social values (Simpson & Willer, 2008).

Findings such as this indicate that individual differences in the underlying mechanisms informing behaviour may produce the same outcome, i.e. to donate help, but the underlying mechanisms that motivate may differ. Some research has suggested that personality and reputation may both determine charitable behaviour (Bereczkei et al., 2007), with real-life readiness to engage in charitable acts associated with sympathy and trustworthiness, and willingness increased if asked in the presence of others.

Empathy

The discussion on proximate mechanisms that motivate mutual cooperation has thus far been artificially divided somewhat into emotional regulatory mechanisms and cognitive regulatory mechanisms. In reality, motivations to help others can be unified in a psychological mechanism directed to trigger the benefits of cooperation, empathy (de Waal, 2008; Kenrick, 1991; Preston & de Waal, 2002; Silk & House, 2011). Empathy has been shown to enhance sensitivity towards the needs of others, with greater regard given to the possible long-term consequences of interventions that deliver help to recipients (Sibicky et al., 1995). This makes empathy a potentially viable motivating mechanism for care giving in occupational contexts, where regard is given to the consequences of interventions for service users. Empathy evidently has the potential to

deliver benefits to donors, as well as recipients. For instance, a review has found that people who volunteer and have other-regarding tendencies, reported greater well-being, were healthier and lived longer (Post, 2005). This demonstrates that empathy-evoked care giving has the potential to result in mutually beneficial outcomes for both the donor and the recipient.

Empathy comprises both emotional and cognitive psychological mechanisms, with humans generally considered as being distinct from other species in the latter (de Waal, 2008; Kenrick, 1991; Preston & de Waal, 2002). Empathy requires the perception of emotional states in others, which activates a shared mental representation of the emotional state in the observer. The evolution of complex cognition in humans has allowed for perspective-taking and the corresponding emotional response to be felt by the observer (de Waal, 2008). This gives the observer an emotional stake in the care of the other, where the instigation of helpful behaviour may improve the observer's emotional state, as well as the emotional state of the recipient.

The central purpose of empathy as a mechanism is to understand, in part or whole, the mental state of another (Hoffman, 1975). Empathy can give quick and habitual responses that are related to the emotional states of others. Such a mechanism would play an important role in regulating social interaction with others in accordance with shared representations of feelings. This mechanism could account for the evidence on shared conceptions of when to help, as well as the reputational costs and rewards of enforcing cooperative behaviours.

Batson and colleagues (1997) have posited that it is empathic concern that evokes helping intentions, with empathetic concern making a significant contribution to predicting helping intentions (Kruger, 2003). Empathy as motivation to help others is likely to consist of an affective concern mechanism, with at least a minimal capacity for 'mind-reading' (Nichols, 2001). Mediators of cooperation require flexibility. Empathy with its perceptual and cognitive control and a neural basis, appears to provide this (Hoffman, 1981). When contextual appraisal is required cognitive empathy is involved in the reaction. De Waal (1996) regards empathic perceptive-taking as necessary for targeted help, taking into account the particular aspects of the situation and adjusting helping behaviour accordingly. He further maintains that similar facial expressions and

vocalisations aid such emotional recognition in others, and that long-term bonds in humans (e.g. partnerships and friendships) create long-term communal "fitness interdependence", which is arbitrated by mutual empathy (de Waal, 2008). Occupational care giving relationships with long-term bonds may also benefit from such mutual empathy.

The assertion of an association between empathy and prosocial or mutually cooperative relationships has been supported by positive associations between self-reflective internalised reasoning, which measures perspective-taking in moral decision-making, and peer ratings of prosocial behaviours (Carlo et al., 1996). Experimentally, females induced to feel empathetic concern for others in a prisoner's dilemma game tended to behave more cooperatively in their choices (Batson & Moran, 1999). Conversely, a lack of empathy in both males and females has been linked with numerous disorders with aspects of poor social functioning, including autism, certain personality disorders, and Williams syndrome (Smith, 2006).

Empathy as a motivator for care giving has been suggested to have an evolutionary basis in parental care (Preston & de Waal, 2002; Silk & House, 2011). Evidence from the neuroendocrine system may support such an argument with the neuropeptide oxytocin offering a proximate neural mechanism for care giving behaviours and concern for others. Oxytocin is found in both males and females, but its concentration is greater in females where it facilitates the initiation of childbirth and lactation. It is also released in a greater concentration during female orgasm, making it not only essential for maternal bonding behaviours, but important in adult monogamous pair bonding behaviours (Turner et al., 1999).

Post mortem studies have located oxytocin receptors distributed in several areas of the human brain, limbic system and particularly in areas connected to emotion and autonomic control (Barberis & Tribollet, 1996; Buijs & van Heerikhuize, 1982). In a more recent account on the relationship between social bonds and neurobiology (Kendrick, 2004), bonding appears to occur in species where oxytocin and vasopressin receptors are readily available in dopamine-producing reward centres. In humans, brain oxytocin is not essential for sustaining maternal behaviours after birth; however, suckling and monogamous pair bonds will activate its release. This evidence supports

the possible role of these neuropeptides in social detection and bonding, by linking these experiences to known pleasure centres in the brain, with continued release strengthening bonds formed over time.

Oxytocin has also been associated with prosocial behaviours, common to the agreeableness personality trait. Experiments administrating oxytocin have associated it with an increased occurrence of trust and generosity in human behavioural outcomes (Baumgartner et al., 2008; Kosfeld et al., 2005; Zak, Kurzban & Matzner, 2005; Zak, Stanton & Ahmadi, 2007). Oxytocin has also been linked to aspects of mental representation or empathy mechanisms, and improvement shown in social deficits (Domes et al., 2007). For example, adults with Asperger's disorder, administered oxytocin, in comparison to a placebo, performed better on affective tasks of social cognition (Hollander et al., 2007), lending support to research that proposes a connection between agreeableness and empathetic aspects of theory of mind (Nettle & Liddle, 2008).

Oxytocin and social support appear to have a dual protective function against anxiety, by suppressing cortisol and anxiety levels following a stressful experience (Heinrich et al., 2003). In combination, the two have a greater impact on suppressing cortisol than if either is administrated separately (Chen et al., 2011; Ditzen et al., 2008; Heinrichs et al., 2003).

Oxytocin evidently has an association with empathy and prosocial interactions and bond formation with others. Whether it is directly involved in the formation of care giving between unrelated individuals in an occupational context is beyond the remit of this thesis. It does however link mutually cooperative behaviours or pair bonds to the neuroendocrine system. The higher concentration of oxytocin in females could adequately account in part for a greater tendency for females to engage in care work over males, together with empathy and other behavioural dispositions, therefore offering an alternative to the view of women in care work as an entirely socialised construct. Indeed, there is experimental evidence in other social mammals that oxytocin is linked to an increase in communal and cooperative behaviours beyond direct kin (Bales et al., 2004; Madden & Clutton-Brock, 2010).

The proximate psychological mechanisms identified in this section appear to be supportive of mutually beneficial outcomes, and are likely to differ between individuals, and within the lifetime of an individual. Empathetic mechanisms are unlikely to be the same in all individuals, under all circumstances, and it is probable that the variation in these cognitive capabilities will influence motivations for occupational choice. As previously discussed, natural selection favoured humans to have malleable developmental experience with a certain level of phenotypic plasticity to meet the adaptive problems of different environments.

Heritable personality traits, which are likely to be universal, are observable as differences in behaviour between individuals (Tooby & Cosmides, 1990b). Some of these heritable personality traits may favour a mutually cooperative strategy. If this is the case, one would expect these to be more frequently noted among those that choose occupational care giving. The following section addresses how individual differences in personality arise, their function, and the relationship they have with engagement in occupational care giving.

2.6. Individual Differences in Mutualistic Cooperation and Care Giving Behaviours

Variation in personality traits can be viewed as strategic individual differences. Different environments have different adaptive problems, making it necessary to identify which strategies will thrive and which will wane in environments defined by their adaptive problems (Buss, 2009). Extracting resources from others to survive and reproduce, ultimately to benefit inclusive fitness, requires exchange relationships of cooperation in human societies, notable in the form of employment for modern human societies. Monetary exchange for time spent working provides individuals with the means to obtain necessary resources for survival, such as food and shelter. The care work environment presents as an example of a mutually beneficial exchange. In order to succeed in the transfer of care, tasks need to be completed with the cooperation of the service user. Failure to do so can result in poor performance and loss of work. Individuals motivated to work in a care work environment should possess personality traits that would fit the care work environment, to maximise direct benefits for

themselves and the care recipient. This section seeks to identify what these traits are and how they benefit mutualistic cooperators. It will introduce an understanding of variation in personality as different strategies to resolve frequent and persistent adaptive problems, with a particular focus on the agreeableness personality trait as the means to bring about and maintain mutual cooperation with others.

2.6.1. Variations in Personality

Individual differences in personality are maintained because different levels of traits offer different adaptive advantages, within different environments and to similar degrees (Buss, 2009). Two forms of balancing selection are considered pertinent for maintaining personality traits; frequency dependent selection and selective responses to environmental heterogeneity (Penke et al, 2007). Frequency dependent selection occurs when several strategies are maintained in the population at a particular frequency relative to each other, sometimes to the extent that the relative fitness value of a strategy can decrease if it becomes too common. For example psychopaths may possess a strategy with mechanisms that detect those easy to exploit (Buss & Duntley, 2008). As previously mentioned, the success of subtle cheats depends on cooperatives predominately populating the environment.

Selective responses to environmental heterogeneity, on the other hand, occur when selection pressures vary in different environments and over time, such that selection will favour different levels of heritable personality traits in certain environments and at certain points in time. For example, neurotic vigilance to threat will afford different fitness payoffs in different environments. The fitness benefit of high neurotic vigilance would be greater in high threat environments, whereas low neurotic vigilance would be favoured in environments where the problem of threat was not prominent (Denissen & Penke, 2008). In defining environments as different adaptive problems, one needs to consider the relevant fitness costs and benefits of levels of personality traits in different environments (Buss, 2009; Nettle 2009). Without these trade-offs, selection would be directional towards the highest level of a trait, which it appears not to be (MacDonald, 1995; Nettle, 2006).

2.6.2. Personality Traits as Strategic Individual Differences

Findings have led to the conceptualisation of individual differences in personality as different strategies to resolve frequent and persistent adaptive problems (Buss, 1996; Denissen & Penke, 2008; Nettle, 2006, 2007a). Although individual differences in broad personality traits are partly dependent on selection pressures, these traits remain stable with high heritability rates and consistency in behavioural responses over long time-spans (Polmin et al. 2008; Rushton et al., 1986). Personality traits impact on inclusive fitness, in terms of life expectancy and long-term relationship success (Buss & Greiling, 1999; Nettle, 2005, 2006, 2007a). They capture stable life history strategies, equally viable, that are the consequence of trade-offs between different fitness costs and benefits. These trade-offs have no unconditional optimal value, but in certain situations, aspects of a trait will fare better than others due to the local environment and selection pressures within the population. For example, if opportunities to meet potential mates are limited by the environment, such as low population density and a remote geographic location, then an individual high in extraversion would explore other environments and seek out social activity and increase opportunities to meet partners. The individual and their high extraversion trait would fare better in this environment and would reap the fitness benefits from such a strategy, over more introverted individuals. High extraversion in this case would increase mating success and the number of social allies, but evidence suggests that this will be at a cost to family stability and physical risks by engaging in new activities in novel environments (Nettle, 2005). Therefore, every benefit produced by increasing a trait, will incur a cost.

In viewing individual differences in personality as strategies to address social adaptive problems, Denissen and Penke (2008) have suggested that personality traits could be viewed as *motivational individual reaction norms* to particular environmental situations or problems. The agreeableness trait, for example, could be considered as a motivational individual reaction tendency to either cooperate or behave uncooperatively, dependent on a high and low level of the trait for agreeableness respectively.

Likewise, Buss (1992) suggested that low agreeableness in individuals would be associated with a more aggressive behavioural approach towards the adaptive problem

of obtaining resources from other people. Individuals low in agreeableness may for example demand or criticise to get the resources, whereas individuals high in agreeableness may try to appeal or praise in order to extract the necessary resources. Although this is a rather simplistic example, it does capture how an individual may navigate the problem-space to increase access to resources for maximising fitness, relevant to levels of personality traits.

This is not to suggest that individuals with similar personality trait predispositions will have identical experiences, but they will share some similar experiences as a consequence of their responding behaviours. Broad personality traits like the factors of the *big five* (Costa and McCrae, 1992) are likely to influence the situations individuals find themselves in and how they respond to them. There is evidence to suggest associations between these personality factors and the occupational choices individuals make (Costa, McCrae & Holland, 1984). Nettle (2007a) calls this *situation selection*, which is the outcome of the two-way flow between behaviour and situation. For example, individuals high in agreeableness will have the tendency to avoid aggressive behaviour, and as a result will circumvent confrontational situations, which in turn will evade the need to incite aggressive behavioural responses. This situation selection will impact on other factors like the environments individuals choose to be in, the jobs and leisure pursuits they choose to engage in, and who they choose to spend time with.

2.6.3. Agreeableness and Cooperative Behaviours

The personality domain of agreeableness has particular pertinence for individuals adopting a mutually cooperative strategy, such as occupational care giving. Agreeableness is a suite of responses primarily concerned with interpersonal tendencies, such as the willingness to help others. Individuals high in agreeableness are often considered as preferred social partners for their trustworthiness and cooperative behaviours (Costa & McCrae, 1992). Those high in agreeableness are also considered to have an empathising ability, and considered more adept at assessing the mental states of others. The mechanisms of trustworthiness and empathy have both been associated with the preservation of cooperative behavioural strategies in humans and other species (de Waal, 2008; Trivers, 1971).

Agreeableness requires the execution of empathy, through consideration and regard for the welfare and needs of others (Nettle, 2007a). Associations have been found between high agreeableness and the social-cognitive aspects of theory of mind (Nettle, 2007b; Nettle and Liddle, 2008), intimating that agreeable people have a higher baseline motivation to attend to mental states of others. There is also a sex difference in both agreeableness and theory of mind, favouring females, which potentially indicates that fitness sustaining harmonious social relationship may offer greater fitness gains for females than for males (Nettle, 2007b). Females invest more and for longer in offspring and being integrated in a prosocial network would considerably increase survival rates, with direct and indirect fitness benefits (Nettle & Liddle, 2008) along the lines noted in the cooperative breeding literature from large group size (Bergmüller et al; 2007; Griffin & West, 2002).

The benefits of possessing high levels of agreeableness include more harmonious social relationships, the advantages brought from a good social support network, and the ability to forgive and appease antagonistic situations. Like all personality traits, agreeableness suffers a fundamental trade-off, in this case the readiness to forego self interest and more direct fitness gains. More detrimentally, high agreeableness in individuals will enable others to take advantage of their overly trusting nature and agreeable tendencies, leaving them prone to exploitation (Nettle, 2006, 2007a).

Evidence from a meta-analysis to investigate the relationship between personality traits and social investment in multiple domains found investment in social roles in the family, work and religion was positively related to agreeableness (Lodi-Smith & Roberts, 2007). This was attributed to a situation selection effect where agreeable people acquired social roles that entailed greater investment in social life and the expectation to behave in an agreeable manner. This increased social investment was related to higher social functioning and an increased social support network, which in turn related to better physical and psychological health and increased longevity (Cohen & Janicki-Deverts, 2009; Lodi-Smith & Roberts, 2007). Similarly, prosocial personality traits have also been associated with different types of helping and donating behaviours. The concern aspect in empathy, the personality trait of agreeableness and prosocial value orientation (Van Lange, 1999) have been found to be associated with

activities such as giving to charity, donating blood and donation of organs after death (Bekkers, 2006; Van Lange et al., 2007).

Taking this into account, highly agreeable individuals would fare better from situational and occupational choices where the formation of compassionate relationships and empathetic behaviours are a benefit. In occupational contexts such as those found in military or judicial occupations, these supportive tendencies would only hinder success and could even be detrimental to fitness. Therefore, individuals high in agreeableness would seek careers that allowed them to make the greatest gains with minimum costs to their fitness (Nettle, 2007a). Research that links the motivations among prospective health and social care professions to certain personality traits has hinted at a possible association between dispositional factors and the motivation to engage in care work (Miers et al., 2007; Parker & Merrylees, 2002).

In accordance with this idea, research on prospective medical students listing as their main motive for a medical career 'a desire to help people' scored higher on agreeableness and the perspective-taking aspect of empathy, than did those that listed other motivations, such as 'being indispensable to others', or 'for gaining respect' (McManus, Livingston & Katona, 2006). Empathy, the core mechanism for helping behaviour, has also been associated with choice of medical speciality. Medical students interested in people-oriented specialities, for example family medicine and general paediatrics, scored higher on a medical empathy measure (Hojat et al., 2005). This relationship between motivation and personality was also associated with how individuals perform within the job. Female nurses driven by the need to help others, scoring high on empathy, social competence, awareness, and in control of their emotions (Lewis, 1980) reported higher long-term job satisfaction and performed better at work (Riggio & Taylor, 2000; Sand, 2003).

The interaction between trait and situation has also been used to explain why prosocial behaviours amongst females and males differ, based on the situation in which the help is given (Kerbs, 1970; Latané & Darley, 1970). For these reasons, an exploration into other motivating factors such as demography and situational factors are required for engagement in care work. Care workers tend to be female and gravitate towards care

work at an older age (Hussein, 2009; Skills for Care, 2012). These aspects are worth further exploration for their significance to care work.

2.6.4. Demography and Cooperative Behaviours

Empirical evidence has also shown a slight, but consistent sex difference in agreeableness, favouring females (Costa, Terraciano & McCrae, 2001). Such an association is supported by evidence suggesting a greater female preference to attend to and empathise with others at work (Browne, 2004). As previously suggested, in comparison to males, females have more to benefit from harmonious social alliances than personal status gains. Solidarity in child care and subsistence are notable in females across cultures, both of which have been linked to greater inclusive fitness gains (Nettle, 2007a). Females may therefore prefer to engage in socially oriented occupations where they can maintain relationships and invest in mutually beneficial outcomes (Browne, 1998, 2004).

Behavioural economic games have not produced straightforward findings for the distinction between the sexes in a preference for mutually beneficial outcomes, although consistent sex differences have been noted in preferences, under certain situations, and in the context of the actions of others (Croson & Gneezy, 2009; Eckel & Grossman, 2008). In general, in experimental games where exposure to risk was absent, differences have been consistently noted between males and females insofar as preferences were made by females that tended to be more socially, rather than individually, orientated in comparison to males (Eckel & Grossman, 2008).

In a modified dictator game, when cooperation was expensive females were kinder, but when it was cheap to help, males were kinder. Males were more responsive to price changes and were more likely to behave in entirely self-serving or entirely selfless ways, whereas females were more egalitarian (Andreoni & Vesterlund, 2001). In a similar experimental dictator game, female donations were twice that of males when partners were unidentifiable (Eckel & Grossman, 1998). Furthermore, when competition was increased in experimental game tournaments, males and females that were performing at a similar level began to differ, with males increasing their performance on the number of mazes solved, while females remained the same

(Gneezy, Niederle & Rustichini, 2003). These findings suggest a female preference for more socially orientated outcomes and less competitive encounters. Evidence from ultimatum games also indicated solidarity between female partners and greater agreement, with females reporting greater sensitivity to the judgements of others (Eckel & Grossman, 2001). In dictator games, groups with more females tended to be more generous and equitable (Dufwenberg & Muren, 2006). Females were more likely to base economic decisions on situational parameters and adjust behaviours according to fairness, rather than to a set of moral principles, whereas males made decisions based on set principles and fixed laws. This suggests a greater female preference to be more sensitive to situational cues, and to adjust decisions based on these particular features in order to protect relations between group members (Eckel & Grossman, 1996).

This general female preference for low risk, non-competitive situations, with sensitivity to situational cues can be found in most care worker settings that benefit greatly from care workers who are able to adopt the appropriate behaviours in response to the cues of the situation, rather than following fixed laws. Better female performance in non-competitive environments, may further enforces a female preference for non-competitive public sector occupations, particularly those in the care sector. The female preference for establishing relationships with others and upholding these relationship is also characteristic of the care-giving occupation and may further explain the over representation of females in this field.

Research on motivating factors for studying certain areas of medicine have been linked to sex, personality, and personal situational factors. Females tended to score higher on helpfulness, responsiveness in relationships and family responsibility, which were associated with reported preferences for areas of medicine with intensive patient contact. Conversely, males tended to score higher on independence, decisiveness, self-confidence and prestige, and these related to their preferred medical fields, which were more instrumental or technology based (Buddeberg-Fisher et al., 2003). Studies on hospice volunteers also found variations in motives given for engaging in care based on demographic factors. Female volunteers were more likely to mention internal rewards, such as feeling that their work is important, compared to male volunteers, who mentioned these to a lesser extent (Chervier, et al., 1994; Ibrahim & Brannen, 1997). Male volunteers in another study were also more likely to be motivated by being a

hospice volunteer for a part-time activity and for personal growth than female volunteers (Roessler, et al., 1999).

A preference for care work among older females may also be related to life history strategies. Individuals have finite time and energy budgets to manage trade-offs made between bodily growth and allocation to reproduction, parenting, kin investment etc. Energy invested in one aspect, such as bodily maintenance, cannot be invested in another, such as reproduction and childcare (Kaplan & Gangestad, 2005). What is considered as the optimal trade-off at any given point will depend on individual qualities and life expectancy. Care-giving to kin may have reduced significantly with age for older care workers, and occupational care-giving may replace care once given to kin. Older volunteers were more likely to allude to rewards such as feelings of value and previous experiences of loss in their motives for volunteering in palliative care. Conversely, younger volunteers sought motivational rewards from being of value to others, but also gaining personally from the experience, such as recognition from others for their work or gaining relevant work experience (Chervier, et al., 1994; Rawlins & Houska, 1986; Roessler, et al., 1999). An alternative possibility could be that a greater preference for prosocial encounters increases with age, with fewer resources to repair the costs of risky, aggressive, or competitive encounters. Prosocial value orientation, which is positively associated with empathy and social skills (Declerck & Bogaert, 2008) actually increases with age, suggesting a preference for more cooperative and equal outcomes with age (Van Lange et al., 1997). This evidence for more cooperative encounters with age might well explain a preference for entering care work at a relatively older age (Hussein, 2009, 2010).

2.7. Concluding Comments

Reviewing insights from the available literature highlighted the specific need for a theory-driven approach for understanding the processes underlying motives for engagement in care work, particularly why certain individuals would be more inclined to participate and remain in care work than others. Current approaches have focused on empirically assessing and explaining the poor pay and regard given to care work, through the commodification of care as emotional labour, which is generally devalued by society. This literature review set to redress the balance and ask why engagement in

care work would be the preferred choice over other occupations requiring a similar level of skill and education - particularly in light of the abundant literature on the potentially negative and dissuading aspects of care work.

Common amongst previous attempts to understand care work was a limited focus; concerned with either the paid aspect of the work, the emotional aspects of the work or the physical act of providing care. A theory is needed that combines the motivation to care *for* someone in a practical sense with the consequence of caring *about* someone in an emotional sense, and the willingness to do this for a relatively low wage. Currently, no theory has attempted to encompass all three aspect of paid care work. In addition, the focus has either been given to motivations for choosing care work, or the rewards and incentives required to remain in care work. A first step would be to consider both, by asking care workers explicitly about their decision to engage in care work and what motivated them to remain in the work. This aspect will be addressed in the first empirical study of this thesis (Chapter 4). A theory for understanding paid care work, that aims to improve recruitment and retention in the sector, should acknowledge both of these and the relationship between them.

In reviewing the literature, the need for an alternative perspective that understands the historical and functional nature of caring for others, and the full range of benefits to be gained from embarking on a paid caring relationship, became clear. By repositioning the focus on to the positive and motivating aspects of the work, a better understanding could be gained of why care workers choose to engage in and remain in a profession where the pay, status and conditions are inherently devalued. Notably absent from previous accounts of paid care giving behaviours is the understanding of why the cooperative and prosocial behavioural aspects of care giving occur. These behavioural strategies have evolved to benefit survival and ultimately fitness. This chapter reviewed the literature from evolutionary psychology to summarise theories and supporting evidence for the evolution of cooperative strategies, in particular prosocial strategies, such as care giving to non-kin, and how these can be applied to predict when and where care giving might occur and with whom. By reviewing some of the ultimate and proximate causes of cooperative behaviour, this thesis proposes that the motivation for paid care giving would be better understood as a cooperative behavioural strategy, one

which would benefit individuals possessing certain personality traits in particular situational and demographic contexts.

Based on the basic assumption that the care worker and service user relationship is at least a cooperative exchange of money for care, although the literature suggests care workers gain more from these occupational interactions, a suitable adaptation is likely to be one of mutual benefit to the care worker, as well as the care recipient. Proximate psychological mechanisms enabling this adaptation were also identified, such as empathy and agreeableness, to explain how individuals engaging in care work behaviours in contemporary contexts may derive fitness benefits from this behaviour. This thesis argues that the preference for care work, over other occupations, could be capturing individual preferences for forming social alliances, with the willingness to tolerate a low wage. The value gained from forming social alliances at work may offset the lower wage.

Consistent trends in the demography of the care workforce have been linked to experiences in care work, such as the formation of relationships with care recipients or flexible hours, which may motivate individuals to remain or leave care work for other occupations (Feldman, 1997; Rix, 2001; Skills for Care, 2008). The distinct demographic composition suggests additional benefits to remuneration, which hold real value for those that choose to participate in care work. There are hints thus far to suggest that care workers might be engaged in a mutually beneficial strategy, where care is exchanged for larger social network benefits (Ayalon, 2009; Doyle & Timonen, 2009; McClimont & Grove, 2004). Immigrant workers with limited networks for emotional and social resources, a particular consequence of the displacement associated with migration, may benefit greatly from the local knowledge, advice and social networks that emerge from the investment in care recipients (Doyle & Timonen, 2009). These benefits have real value, saving time and money that would otherwise be required to build these networks in other ways, and by other means. As females, and especially those with children, benefit more than males from cooperative social alliances (Hrdy, 2009), it is possible that key dispositional differences at the level of sex, and possibly the individual, may contribute to the decision to become a care worker.

The population of care workers is quite possibly a distinct group characterized by demographic, dispositional and situational factors. In order to explore this, and to better reveal their strategic decisions, exploratory interviews are required with care workers about their decisions and motivations for engaging and remaining in care work. This will facilitate a fuller understanding of the way in which aspects such as sex, age, ethnicity, nationality, personal experiences, dispositional traits and the formulations of emotional relationships may interplay to motivate individuals to choose and remain in care work. Commonalties noted in this literature review and the interviews with care workers, should be the starting points for making predictions about why individuals decide to engage and remain in care work. This will be the analytic focus of the first empirical study (Chapter 4). Before this, in the following brief interim chapter, the aims of each of the empirical chapters will be outlined in further detail.

3. Research Aims and Methods

In Chapter 2 the available empirical and theoretical literature on occupational care-giving was reviewed. Evolutionary psychology was introduced as a potentially useful theoretical framework for understanding paid care giving. The lack of available evidence on the motivations for participation in care work and the utility of an evolutionary framework for understanding paid care work, have formed the antecedents to the research aims addressed in this thesis, and the proposed methods for investigating them. The purpose of this brief interim chapter is to lay the foundations for the empirical chapters that follow by descriptively outlining the methods employed in order to operationalise the research aims. It begins by briefly reiterating the aims set out in Chapter 1.

3.1. Research Aims

The central aim of this thesis is to understand the factors that motivate individuals to engage and remain in paid health and social care giving from an evolutionary perspective, and the implications these have for recruitment and retention.

Entailed in the central aim are three specific empirical aims:

i. To explore motivations and other factors associated with engaging and remaining in care work;
ii. To develop a measure to assess for individual differences associated with participation in care work;
iii. And, to identify individual differences between care workers and other occupational groups.

A mixed methods design is used to address these aims. Qualitative methodology is used to explore care worker motivations, how and why individuals decided to participate in paid care work in the first instance, and their motives for remaining in care work. Taking into account the diversity of individual experiences, as well as the lack of empirical evidence on care worker motivations, qualitative methods provide the means to explore the emergence of commonalities in the experiences of care workers.

Quantitative methods are then used to psychometrically develop a measure to assess for individual differences associated with care work, and to identify the strength and magnitude of these differences between care workers and other occupational groups. The rationale for the methodology employed in this thesis is further developed in Chapters 4, 5 and 6. In this chapter, descriptions are given of the methods as they apply to the three specific empirical aims.

3.1.1. To explore motivations and other factors associated with engaging and remaining in care work

As argued in Chapter 2, there is limited empirical research on who paid care workers are and what motivates them to engage and remain in care work. To explore care worker motivations and other factors associated with participation in care work, I conducted semi-structured interviews with care workers to identify, analyse and report the patterns of meaning and understandings about decisions to engage and remain in care work. I used data-driven semantic thematic analysis to analyse these interviews, in order to derive broad analytic themes from these detailed individual accounts. Patterns and broader meanings in the themes were interpreted and influenced using an evolutionary perspective. As a secondary purpose, the findings from these interviews, together with the literature identified on care giving behaviours in Chapter 2, informed my predictions about the care workforce and the social strategy they espouse.

3.1.2. To develop a measure to assess for individual differences associated with participation in care work

In order to develop a measure that assesses for individual differences associated with care work, the themes I had identified in the interviews and the empirical findings noted in the literature review provided a conceptual basis for the characteristics likely to be associated with participation in care work. In line with an evolutionary perspective, emergent themes that centred on personal attributes, prosocial preferences, demographic and situational factors that I considered were relevant to care work, formed the basis of the questionnaire. Dispositions considered inherent in behaviours prior to engagement in care work from the interviews in Chapter 4, and the literature review in Chapter 2,

were included in development of a pool of items appropriate for the assessment of individual differences associated with participation in care work.

I developed the questionnaire using reliable and valid personality items pooled from standardised scales and subscales. I applied principal component analytic techniques to pooled items to form coherent subsets potentially associated with care work in a meaningful way. I assessed the developed questionnaire measure for internal structure, reliability and construct validity of the resultant subscales.

3.1.3. To identify individual differences between care workers and other occupational groups

I used the questionnaire developed in Chapter 5 to identify individual differences between those that participate in care work and those that participate in other occupations at a similar socioeconomic level. In part, this served to validate the questionnaire's appropriateness for assessing relevant demographic, situational and dispositional factors that are considered to be associated with care work in this thesis. To more explicitly assess the assertion for a greater preference for mutualistic cooperation in social interactions, as stated in Chapter 2, I used a task measuring preferences for prosocial mutualism amongst care workers in comparison to individuals in other non-care occupations. I employed bivariate analyses to assess for significant relationships between predictors (demographic, situational, dispositional, and preference predictors) and participation in care work. I used binary logistic regression analyses to assess the relative importance of the significant predictors to the probability of participating in care work.

Having briefly outlined the methodological framework for the thesis, the following chapters present the empirical studies in depth; beginning with Chapter 4 – the qualitative thematic analysis of care workers' experiences and motivations for choosing to engage and remain in the profession.

4. Exploratory investigation of care workers and their motivations

4.1. Introduction

In Chapter 2 the suggestion was made that little is known in the literature about who paid care workers are, and what motivates them to engage and remain in care work. Although information regarding the demographic composition of the care workforce in England has increased somewhat (Cangiano et al., 2009; Hussein, 2009, 2010, 2011b; Skills for Care, 2007, 2012), no empirical research has explicitly explored the motivations and factors associated with the decision to engage in and remain in care work.

Previous qualitative research has explored the specific experiences of Zimbabwean care workers in Britain (McGregor, 2007), as have other qualitative research studies that purposefully sampled care workers from specific migrant populations in the UK (Cangiano et al., 2009) and Ireland (Doyle & Timonen, 2009). These studies focused on exploring the positive and negative experiences of the work, as reported by migrant care workers, with some extracts framed as experiences of reward and motivation. However, when motivations for engaging in care work were raised, these were usually implicitly inferred from the participants' talk and not explicitly explored with the participating care workers themselves.

In addition, exploratory interviews with care workers in England have also been conducted as part of wider service evaluation programmes. In a study aimed at exploring factors promoting satisfaction at work, qualitative interviews were conducted with seven care workers within a single service (Ryan et al., 2004). These interviews aimed to identify sources of satisfaction, dissatisfaction and support, work processes, and personal development. These were all discussed in relation to their experiences of working within the particular service under evaluation. Five of the seven care workers interviewed had previously worked in other services, providing similar care for patients with dementia, but this contextual variety was not explored. The interviews centred on the experiences within the service being evaluated; their motives for and experiences of

engaging in care work were not explored outside of the remit of satisfaction and experiences within their current service.

Survey research in England has also attempted to identify the avenues for satisfaction and rewards in care work which could motivate participation in care work (Hall & Wreford, 2007; McClimont & Grove, 2004; Penna et al., 1995). Enjoyment in helping others, and the caring aspects of the work featured as important reasons for deciding to engage in care work. Relationships with services users and good working relationships with managers and others become more important to satisfaction with the job once care workers were in the job (McClimont & Grove, 2004). This type of survey approach, with short and often closed response formats, allows little room for the exploration of the factors that may mediate the relationship between satisfaction, motivation and workforce retention. Interviews and observational data from the US has supported explanatory models for the importance of the relationship between care workers and service users as one possible factor central to job satisfaction and motivation to remain in care work (Ball et al., 2009; Piercy, 2000).

Previous research has pointed to some interesting factors likely to influence motivations for engagement and participation in care work. However, these studies have not explored motivations and decisions in depth, with both national and migrant care workers in the England. The purpose of this study was to address this gap by interviewing paid care workers about the experiences that led to their current occupational choice and why they have chosen to remain in the care work, from their recollections of their experiences before being a care worker to the present day.

For this reason a qualitative methodology was chosen to identify, analyse and report the patterns of meaning and understanding about decisions to engage and remain in care work. Thematic analysis, as outlined by Braun and Clarke (2006), was used to analyse these interviews. This is an inductive approach to derive broad analytic themes from detailed data sets. Analytic interpretation enables the theorising of broader meaning and significance. This is particularly useful for the exploration of populations where experiences and opinions have not been explicitly or widely canvassed, such as with care workers' motivations.

The primary aim of this study was to explore motivations and other factors associated with engaging and remaining in care work. As a secondary aim, the findings from these interviews, together with the literature identified on care giving behaviours in Chapter 2, will be used to inform predictions about the care workforce and the social strategy they espouse. Findings from this study will also indirectly inform the development of a measure to assess for associations with care work in Chapter 5.

4.2. Methodology

Throughout this thesis a realist framework was adopted, which includes the qualitative methods presented in this chapter. This epistemological framework is in keeping with the assumptions made throughout this thesis about the social and psychological world under investigation. The methods of data collection and analysis are in keeping with the supposition that the knowledge sought can encapsulate and reflect, as truthfully as possible, something that is happening in the real world, which exists autonomously of the researcher and participants' views of it.[2] The role of the researcher, within this framework, is to identify and reveal these processes in a comprehensible way (Madill et al., 2000). The suitability of this approach hinges on the primary aim of gaining insight into the motives care workers have to engage and remain in care work. Understanding the subjective experience of each individual care worker interviewed is not the primary aim of this study, neither is the use of language to construct versions of reality. Instead the purpose is to discover the psychological processes underlying these subjective experiences and decisions. In other words, the decision to engage in care work is viewed as a social reality and is knowable as such.

In terms of the data, this approach takes the verbal accounts at face value to some extent, assuming that what is reported in the data reflects reality within the confines of an interview situation. How people make decisions about engaging and remaining in

[2] It is recommended that qualitative researchers should be explicit about the epistemological framework they adopt, and how this influences the way in which they interpret their data (Willig, 2008). In contrast to a realist position, the other dominant epistemological framework that is frequently adopted by qualitative researchers is social constructionism. However, this position would not have been appropriate for the purpose of this research as it rejects the notion that language represents and offers a way of knowing participants' internal psychological processes.

care work can be accessed by the descriptions they give of their experiences leading up to engaging in care work, and their descriptions and feelings for remaining in care work.

Thematic analysis provides a means for uncovering the underlying psychological processes and social structures embedded in these descriptive accounts. Meaning can be inferred from the emergent themes identified in the data set (Boyatzis, 1998; Braun and Clarke, 2006). A systematic thematic analysis across an entire data set can provide a rich account of the views of those sampled, which can lead to the development of data-led predictions about individual experience and behaviour (Parker, 2004). Such richness of detail cannot be elicited from quantitative approaches to the same extent.

Qualitative approaches also differ from quantitative approaches in the parameters used to gauge what is 'good' research (Parker, 2004). The criteria traditionally associated with the evaluation of quantitative methodologies, such as sample size and representative sampling to ensure objective and replicable outcomes, lack the same relevance in qualitative approaches. A sample deemed large enough to be representative of the population would yield a vastly complex dataset, one too cumbersome to analyse in any depth, defeating the purpose of employing qualitative methods to synthesise the data in the first place (Yardley, 2000). Instead, some qualitative approaches utilise theoretical sampling of a small number of participants, based on certain characteristics specific to the phenomenon under investigation. For the purpose of this study, participants were sampled if they had experience of care work with adult and/or older adult populations, and were still employed as a care worker with adults and/or older adults in England.

Theoretical sampling can also be influenced by the early stages of data analysis. For example, if we know that a large proportion of care workers are immigrants, but we only have interview data from UK born care workers thus far, we may then seek to sample in a purposeful way to incorporate interviews with immigrant care workers. Further data can be collected in order to either elaborate or query emergent codes and the subsequent sub-themes in the initial stages of analysis. Qualitative analysis seeks to start broad, in order to encapsulate the variety, but ultimately theoretical sampling aims to refine existing codes until no new codes, or variations of existing codes, emerge from

the dataset. This process of continual sampling until the codes and sub-themes capture the majority of the dataset is often referred to as theoretical saturation (Willig, 2008), although Glaser and Strauss (1967) point out that complete theoretical saturation is more of a goal than an actuality. To remain faithful to the principles of theoretical sampling, data collection for this study ceased when no further codes and/or sub-themes emerged.

A further requirement when conducting qualitative research is to be transparent about the theoretical position, if any, one is taking when analysing and interpreting the data (Madill et al., 2000; Parker, 2004). The theoretical perspective taken for this analysis was driven by the researcher's analytic interest in the motivations of engaging and remaining in care work from an evolutionary psychological perspective. A data-led semantic approach was chosen to identify, analyse and report the candidate themes at the surface level. The significance of patterns and broader meanings are interpreted from this perspective. The primary aim will be to understand the motives for deciding to engage in care work, and the motives for remaining in care work. The secondary aim will be to incorporate the findings from this study with the literature identified on care giving behaviours in Chapter 2, to inform predictions about the care workforce and the social strategy they espouse.

4.2.1. Recruitment

I recruited through contacts made with home care provider organisations in Essex, London and Nottingham. To ensure data protection of personal information, care workers were approached and invited to participate in the study through their home care provider agency. I circulated information about the study and the consent procedure to prospective participants through regular weekly/monthly staff information mailings. Care workers interested in participating in the study were advised to contact me directly. Remuneration was not offered for participation, although participants were entered into a prize draw to win £50 of high street vouchers.

4.2.2. Participants

Most of the participants were recruited from Essex and London, with only one recruited from Nottingham. Theoretical saturation was reached after 20 interviews for this study, when it was deemed that no new information was arising from the interviews. Experience of being a care worker varied from 3 months to 20 years, with a median average number of years experience as 5. Table 4.1 below outlines the detailed demographic breakdown of the sample.

Table 4.1. Demographic details of the sample by participant number

Participant	Age	Sex	Ethnicity	Relationship Status	Number of Children
1	50	Female	Indian	Married	3
2	32	Female	Nigerian	Married	1
3	29	Female	Zimbabwean	Married	2
4	32	Female	Nigerian	Married	1
5	27	Female	Nigerian	Partner/Cohabits	1
6	33	Female	English	Married	1
7	34	Female	English	Married	1
8	39	Female	English	Cohabits	0
9	49	Male	English	Divorced/Single	4
10	39	Female	English	Partner/Cohabits	0
11	44	Female	English	Divorced	2
12	43	Female	Bangladeshi	Married	3
13	28	Female	Zambian	Single	0
14	43	Female	Punjabi	Married	2
15	27	Female	Malaysian	Married	0
16	22	Female	English	In relationship	0
17	40	Female	Spanish	Married	4
18	36	Female	Irish	Married	1
19	24	Female	Jamaican	Married	2
20	33	Female	Nigerian	Married	1

Nineteen females and one male care worker were interviewed during the study. The greater proportion of female participants was expected in this sample, as female care workers make up the vast majority of the care workforce in the UK (Labour Force Survey, 2008). The participants ranged in age from 22 to 50, and the mean age was 35 (std. deviation 8.00). Twelve of the participants identified themselves as having single, or dual, British citizenship. Seven identified their ethnic origin as White English, seven

as Black African or Caribbean, four as Asian, and two as White European. All of the English participants and the Irish participant were born in the UK. The remaining 12 participants were born outside of the UK. The majority (17) were married or cohabiting with a partner; others specified that they were either divorced or single. The majority also reported having at least one child (15).

4.2.3. Materials

Information sheets were constructed to advertise and inform potential participants about the purpose of the study and what would be involved. The information sheet contained full details about the research question, background to the study, and outlined what participation in the study would involve. In addition, the study recruitment criteria and right to withdraw at any time were also detailed along with the assurance of confidentiality of personal information, and the restricted use of the data. Contact details were also given for further information.

Copies of the consent form accompanied the information sheet. The consent form was designed to confirm that participants understood the contents of the information sheet and agreed, in writing, to take part in the study. The form confirmed that consenting to participate included the interview being recorded on a digital voice recorder, and also the right to withdraw from the study at any time. The full information sheet and consent form are available in Appendices 1 and 2 respectively.

The semi-structured interview schedule consisted of questions about the experiences of being a care worker, attributes brought to the work, what they felt they personally received from the work, and how the work fitted in with the rest of their life. The interview schedule comprised two main sections to reflect the primary aim of the study to explore decisions to engage and remain in care work: Firstly, circumstances, experiences, and decisions leading up to becoming a care worker and secondly, the experiences of being a care worker from the first day of work to the present day.

The purpose of the interview schedule was to enable participants to reflect on their own experiences and to allow them to identify what motivates them to engage and remain in

care work. Prompts were used to elucidate areas of interest further, as well as to facilitate participants to reflect on their own experiences in greater depth. Appendix 3 contains the full interview schedule, including prescribed prompts.

4.2.4. Procedure

Ethical approval for the study was granted by the University of East London Ethics Committee (see Appendix 4 for confirmation). The procedure was carried out in accordance with the British Psychological Society (BPS) guidelines for conducting research with human participants (BPS, 2010). Once contact details were received from individuals interested in participating, the researcher contacted them to set up interview dates and times. Individual interviews were conducted at a convenient time and location for the participant. This was usually the participant's home (75%), or place of work (25%). Before the interview began, participants signed the consent form and were reminded of their rights to anonymity and to withdraw from the study at any time. They were informed that the recorded interviews and transcripts would be securely stored and destroyed at the end of the research project, which could be up to five years. In addition, they were notified that anonymous quotes from the interviews would appear in the thesis and other published work.

Participants were asked for some basic demographic information at this point. They were assured that this information was only for the purpose of describing the sample, and would not be used in any other way. The duration of the interviews was between 15 and 40 minutes (mean duration approximately 22 minutes). On completion of the interview, participants were asked if they would like to add anything not covered in the interview, about their motivations and experiences of being a care worker. They were duly thanked, and any questions about the study were addressed. Contact information was obtained at the end of the interview for the purpose of the prize draw.

4.2.5. Data Analysis

The digitally recorded interviews were transcribed verbatim in accordance with the transcription conventions of Jefferson Lite (Parker, 2005) using commas, stops and

italics to record short pauses, long pauses, and emphases respectively. Non-verbal information was not recorded, as the focus was on the verbal utterances. These transcription conventions were sufficient for an analysis concerned with semantic meaning (Boyatzis, 1998; Lapadat and Lindsey, 1999). Once the transcripts were prepared they were subsequently subjected to inductive semantic thematic analysis (Braun and Clarke, 2006). In general, concepts were considered important if they recurred within and across the analyses of the transcripts. Similar concepts were grouped to form sub-themes, which were then grouped to form five larger candidate themes. The detailed process for the data analysis was as follows:

The first stage was familiarisation with the data, a process common to all qualitative approaches (Boyatzis, 1998; Patton, 2002), which involved repeatedly reading transcripts to facilitate active engagement with the data. The generation of codes began after several readings of the transcripts. The coding stage involved manually noting interesting features of the data on the transcripts for the entire data set. Each part of the data set was examined for meaning, and data items were collated by descriptive codes which summarised some particular feature of the data item (Aronson, 1994). The next stage was searching for themes. The initially collated and coded data items were reorganised to identify potential themes. This involved the utilisation of tables to facilitate the conceptual reorganisation of codes and sets of codes into broader sub-themes. The sub-themes were then clustered to form five overarching candidate themes. Examples of coding and theme generation can be found in Appendices 5 and 6.

The final stages of the analysis were the checking and finalising of themes. Sub-themes and candidate themes were checked against the data items to ensure that themes were grounded in the data set and avoided insubstantial interpretation. Themes were also checked for internal homogeneity and external heterogeneity (Patton, 2002). These dual criteria are often used to ensure that data within themes meaningfully converge together, and that those in other themes are conceptually identifiable as representing something different and distinct (Braun and Clarke, 2006). This was done by reviewing the coded extracts against those within the same theme and coded extracts in other themes. The aim was to detect any themes which were trying to encompass too much variety, as well as ascertaining themes that did not have enough data items to support them.

Detailed checking of the codes and the corresponding data items warranted certain sub-themes, which appeared to be sufficiently similar, to be collapsed into a smaller number of sub-themes. When the candidate themes and sub-themes showed a good fit to the data the final five themes and corresponding sub-themes were defined and named. The resulting themes are reported below.

4.3. Findings

Five candidate themes were identified as relating to the decision to engage in, and remain in, care work. These were: (i) care work as a propensity and identity; (ii) close relationships in care work; (iii) prosocial preferences and making a difference; (iv) challenging perceptions of care work, and finally; (v) practical benefits of care work. Where necessary these themes have been further divided into their component sub-themes, to allow for greater explanation. Interpretations of the themes are accompanied with illustrative quotes from the transcripts.

4.3.1. Care work as a Propensity and Identity

This theme captures the view held by the participants that care work has allowed an outlet for them to express the natural tendencies and personal characteristics they deemed made them suitable for care work. Caring for others was considered as a constant feature of the individual's personal life, both before and beyond their professional life as a care worker.

Natural Tendency for Care Giving

Most of the participants had worked in non-care sector occupations before becoming care workers. This transition into care work did not seem to come as a surprise to most. The participants described how they embraced the opportunity to work where they could express their inherent interest in supporting and helping others. Caring for others was discussed as something they had always done informally, and valued. Whether that

value came from the enjoyment of spending time helping others, or the satisfaction of helping someone in need, care work was not regarded as just a job, but as an extension of the desire and a capability to help others.

They felt that caring was part of their identity. Helping others was part of how they described themselves and their role in relation to others, both in and outside of the context of work. Most of the participants had a history of providing informal care for others before becoming paid care workers themselves. The participants reported that these caring capabilities were often pointed out and commented on by those close to them:

> "Erm, a lot of them [friends] were like, well, that's what you were *born* to do. *What* you should have been doing years ago. And then, a lot of them were like, quite surprised I think, because obviously my background wasn't that. Like, I'd had very different jobs". (P7)

The proclivity toward helping others was experienced in all aspects of participants' lives, as one participant describes:

> "Like, when I was driving the vans and that, and I was out and about, and I would meet people and that, and they would be like so what do you do? I'd be like, I'm a delivery person. I deliver lorry parts, but, *I'm* still a relief senior support worker at the Birch Tree. I *had* to get that in. I couldn't like say that I wasn't like, a care worker… I don't consider myself a special type of person. I just like to help people, whether that be in work or out of work. I mean like, even if I'm up Tescos and I see an old person struggling, I'll always go over and help them." (P18)

The participants spoke about caring for others as something they had always been able to do with ease. It was regarded as being an important part of their personal lives, before it became a feature of their professional lives. The ability to provide care for others was often associated with experiences of prolonged care for family members or close friends. These unpaid care experiences were considered important in shaping how they saw themselves as people who care for others. The role of taking care of others was something that was imperative in their life. When circumstances changed, and they were no longer able to take care of someone close to them, the propensity and interest to care for others manifested in others ways, which including getting involved in paid care work:

> "Because that is like our inside values to look after our grandma and granddad as well, when I came to this country I missed them. So I said I oh, I don't mind looking after elderly people I actually enjoyed it." (P1)

> "I was childminding. Taking care of my sister's children… I think just being with the children, and knowing that there's someone that needs to be cared after. It made me like apply." (P3)

> "Actually, how I started this work was when I was schooling back in Nigeria, and if anyone in my family was ill or my friends, I would end up taking care of them. So when I came to school in the UK and needed extra cash, to work, it was always something I had done. It was always something I enjoyed doing, and getting paid to do it, made me get into the profession." (P5)

The participants were clear that the ability to care for others was not regarded as a skill that can be taught, but as an instinct with a deeper emotional basis. This was articulated in the commonly reported sentiment that 'not just anybody' could be a care worker. They acknowledged that a person needs to have a natural propensity to provide 'love' and 'care', without which the caring aspect of the work would be deficient. They spoke of their concern that care work was not something that could be taught, instead that the ability to care came from within the person:

> "I don't think everyone can do care jobs because it comes from your heart, and I know we all need the money, but if you want to be a good carer, you have to work from your heart." (P1)

Purported suitability for care work was associated with a depth of feeling for those in need of care. There was substantial apprehension about those with apparent superficial motives to care. Caring feelings had to have considerable depth to be respected and sustained; those lacking the depth were deemed incapable of carrying out the full remit of care work:

> P: "I think it takes certain, I wouldn't say skills per se to do it. When you think about skills, you think it's like something you can learn. But it's actually like the things you are born with." (P20)

> I: "Like what?"

> P: "Like the patience you've got to have in situations. It's not like everybody can learn it. I mean you might teach that to someone who is so aggressive and impatient. Over time, maybe they'll calm down but, but the basic nature will always come forth. So things like being sensitive, you can teach people like; to carry her this way, to do this that way. Just the general stuff, but just the real things that the clients need are things that a person has to be born with really. So there's certain things, being sensitive, being caring, truly, truly caring for the person. Not thinking like, oh, she's going to get me a present, but just like, truly, truly being there the way you should be, those things you can't teach people. So you've really got to have those things naturally..." (P20)

A Personality Suited to Care

As well as being specific about the derivation of good care giving behaviours, the participants were also specific regarding what they thought made a good care worker. Emphasis was placed on the importance of attributes associated with general cooperative competence and dependability. In particular, qualities such as: patience, tolerance, understanding, respectfulness, sensitivity, empathy, loyalty and honesty were often used to talk about these internal attributes. They either used these to discuss their own suitability for care work, or these featured in their views of what 'good' care workers should and should not be like:

> "I knew that I was the sort of person that anyone could get along with, if they wanted too. I knew that I was a good listener. I'm a fun person to be with so, and that I am very punctual, you can ask them that [client's family]… So I knew I could bring all those things and fix it into the job I am doing." (P2)

> "I can really empathise with others and I believe that I'm a really patient person. I like to think of myself as being caring as well." (P5)

> "I think you've got to have a lot of patience. You've got to be understanding, and first and foremost, you've got to respect what they want. And what they need. And have got the time to wait and let them finish what they've got to say. Because I mean, some of them are slow, and what not. But, it's nice to know that you're sitting there listening to them, instead of going, oh come on. If you didn't have no patience, that's the way you want it, I don't think you should be doing that job. And there are a few of them that are in here [the agency], that do that." (P10)

Although the participants spoke extensively about particular attributes and behaviours they thought were appropriate for entering into care work two particular capabilities were considered distinctive prerequisites for engaging in care work. These were (a) *perspective taking* and (b) *adaptability*, and were salient in all of the interviews.

Perspective taking allowed for empathic behaviour and interpersonal sensitivity in their approach to their care work. Positive experiences at work were associated with being able to understand the position of those they were trying to help. This enabled them to be regarded as cooperative and dependable in the way they supported others. Participants also spoke at length about the level of *adaptability* required when working with different people with variable conditions in intimate ways, particularly when in their own homes. The participants acknowledged the deeply personal nature of the work they do, and the potential to be perceived as intrusive and insensitive by those receiving the care if they showed a lack of understanding and inflexibility:

> P: "Another difficult thing is for you to have strangers come into your house. It's quite difficult, and I'm sure it is very difficult for them to get along with as well."
>
> I: "And is it difficult for you?"
>
> P: "To me, I just get adapted to any kind of situation [laughs]. No, it wasn't difficult for me. No, when I saw it in their face that it was difficult for them to, sort of, accommodate, you have to pipe low [be quiet] for them to reason and accept you..." (P12)

The ability to understand the perspective of each individual service user was an important part of being accepted to help in their care plan. The participants talked about their responsibility to adapt their behaviour to the needs and perspectives of the service users, as well as to the situations and environments they encountered. It was important that they acted with the service user's perspective in mind, and modified their behaviour to suit when necessary, even if it ran counter to their own personal opinions:

> "Like some of the carers have been to some of the clients, and the clients don't want them to come back. Like, this shows like, their characters [are] different and that. But I don't want to be like that, so that's why I change myself all of the time. But this is like, in me."(P15)

> "I'm very sensitive to people and their situations, like if they want to be quiet, I can be quiet, if they want to talk, I can talk, you know, that sort of thing." (P20)

Consideration for others and adaptability were not always easy to achieve. The intention and motivation to try were deemed important to the participants. They reported trying to perspective-take and adapt to explain infrequent experiences of rudeness or challenging behaviour from those they were providing care for. Personal feelings were often put aside in order to carry out the care giving tasks, often by separating the negative action from the person, and taking the context into consideration. They were keen to seek the appropriate attribution for the behaviour, as opposed to blaming the individual, or themselves, for the personal hurt encountered:

> "Actually the one that was rude to me, I don't blame him. I think, I think he was into his sport and he got injured, and he is a young chap, and I think that has more to do with him being rude. So I don't blame him in a way." (P2)

> "Actually, sometimes I work with difficult clients, and you should understand that things are tough for them." (P5)

The time spent with service users leads to better understanding about their individual wants and needs, and how to address them. The participants acknowledged this as a good thing and constructive in establishing a good working relationship.

4.3.2. Close Relationships in Care Work

Much of the discussion about experiences of satisfaction at work, and the motivation to remain in care work, centred on the relationship between care workers and their service users. The participants spoke extensively about a unique relationship with service users, and distinguished care work from their other experiences of paid work. Attachments were formed with service users that went beyond their previous expectations of what a traditional professional working relationship should be.

Emotional rewards were experienced from involvement in these intimate caring roles, which reinforced a personal commitment to care beyond the parameters of paid care work. However, emotional costs were also felt when the relationships ended, or when

the care worker felt helpless in meeting the service user's needs. Maintaining professional boundaries and some emotional distance was required when affectionate relationships developed with service users to avoid the emotional cost when caring relationships ended.

Friendship and a Professional Relationship

The nature of care work creates a need to communicate in an understanding and sensitive way, ensuring service users feel safe and comfortable with the person providing their care. During repeated interactions of giving intimate practical and emotional care, mutual respect and the building of a rapport occurs, with service users (and occasionally their families) becoming like friends. This is perhaps unsurprising, when recognising that care workers enter into the homes and personal lives of their service users. Physically and emotionally caring for someone increases this physical and emotional proximity, which differentiates it from other jobs:

> "I think social care is the only commodity you deal with, which is not like a tin of beans you put out on the shelf. You know, these are real human beings, with feeling and everything else. And you do build a rapport with them, and a good one. And you probably spend more time with them than you do your own family. And equally with you, they probably spend more time with you than they do their own family. So you, you know, it has nothing to do with being professional and not being professional. I mean, obviously, we all know our boundaries and that. But I mean, how can you work with somebody, X amount of hours a day, and not, built that kind of relationship? I mean, you've got to be a pretty cold cut person, not to feel anything at all." (P8)

The informal work environment of the service user's home blurs traditional conceptions of home and work environments. The participants also talked about balance in the friendships they have with service users, aware that the relationship has to be professional too. The relationship with service users resembles a friendship, but the professional boundaries are also there, as overtly expressed by this participant:

> "I think the client carer relationship, should like, always be cordial, open, because you are doing lots of stuff together, so you really need to like be one. But at the same time you need to draw the line, that's the client and I'm the carer. And there's an issue of privacy, you need confidentially, you need to keep personal stuff, don't go blabbing

> somewhere else, so we always have that. With that binding you, you kind of like become friends, but at the same time, it's still a client carer relationship. It's a very funny, it's kind of unique." (P20)

Care work was discussed as a balance between providing a professional service and giving emotional support. The balance of the two was important, with equal weight given to the practical aspects of managing the care tasks, as well as the socio-emotional approach needed in care giving. The participants spoke about this in relation to their personal views of what care should be like, but also what they thought made for a good professional relationship. Balancing this complicated relationship for some was seen as a struggle at times. The intention was to keep some emotional distance to protect themselves and their service users from the emotional distress of watching service users suffering. One particular participant talked about the difficulties of being too emotional, or too practical when engaging in care work and the need for balance.

> "If you are too much of an emotional person then care work is too upsetting, because the majority of people do die if you stay in one place for long enough. So, if they've had people with cancer, or who have had a stroke, and are really in a poor state, and often you have to cope with that... And you do get an awful lot of people that do just have the practical side, but without the empathy, and that's what the people [service users], my people, tend to complain about the most. I had a carer, and I was shadowing her for a new job. And she said to me, let me get them up and onto the commode, and you can wash them while they are on there. And I said, I think I'd ask first; do you need to use the toilet? How would you like to do it?" (P6)

Commitment and Cost of Care

Participants spoke of the need for balance between the friendship formed and the professional relationship with regard to service users. However, the reality of achieving this balance was sometimes more difficult in practice, with boundaries being blurred. Attachments were formed with individual service users beyond that of the professional duty of care, which were emotionally costly for some. There was a sense of a personal obligation and a commitment to care beyond what was expected as a care worker. Participants talked about how they would spend additional time with service users out of the contracted hours, or how they would introduce and integrate service users into their personal lives:

> "There was recently this one lady, *X*, she just couldn't afford to heat her house, she just couldn't and it nearly killed her last winter. And the house was dirty and she didn't have cleaners, and I brought her cream cakes, took my daughter around to see her, and I just sat with her really. Yeah, she really just needed a better environment. I don't know, that was horrible, just couldn't do much." (P11)

When participants spoke about relationships with service users, these were analogous to relationships with family members and friends. There was a real commitment to care for the service user as a person, above and beyond the tasks stated in the care package. This often resulted in extra support and care being provided outside of the contracted hours by the care worker. The continuation of personal friendship outside of work often made it difficult for care workers to 'switch off' outside of work. The participants articulated thinking about ways to help service users outside of work, or finding it difficult to disengage after the shift had ended. The loss of a service user due to a change in the care plan, or the care package being terminated for some reason, was frequently equated to the feeling of losing a friend. The participants discussed the emotional costs of having these committed relationships with service users. Having to cope with bereavement and losing those they had formed friendships with, even though it was often an expected part if the job:

> "I had a problem once with a young man, and he had Aids and he moved out of the area and we remained friends. And he believed that he wasn't going to die, because the doctor had told him that there were so many inhibitors now, that you could be the first to live. But he did die. Yes, so from that I had to have bereavement counselling, the lot really. I think a lot of the time now, I do get upset, and I do miss people." (P6)

Emotional Rewards of Care

Losing a service user, particularly when a friendship had formed, was viewed as a very difficult emotional experience to overcome. This could potentially dissuade people from remaining in care work, but the participants did not dwell on the emotional loss and balanced this with focusing on the emotional rewards of care work instead, placing the emphasis on feeling appreciated by service users for the work they did and the emotional rewards this brought with it. Interacting with service users was motivating

and outweighed the more emotionally challenging aspects of the work. Satisfaction in work came from the unique relationship with service users and the internal rewards they felt as a consequence:

> "Well, what you enjoy most about your job is the people I work for, not the company, I mean the people that you help. Service users, because they're always grateful to you and they are always happy to see you. And it's nice, yeah, it's a good relationship. Yes, it's rewarding." (P17)

The emotional rewards from the relationships were felt by the participants as different to the satisfaction they had felt in other types of work. The satisfaction and personal sense of achievement continued out of work and remained with the participants, reinforcing their personal commitment to care. These feelings of satisfaction were regarded as specific to care work and made the work personally significant to the participants:

> "It is a very rewarding and precious job, in a sense as well, because it is probably the only job, where you get a real deep-seated, heartfelt job satisfaction from. It's not like stacking twenty cans of beans. It's a different feeling totally. You've seen their lives progress. I mean particularly with learning disability, and for older people, even though you know that their lives are not going to progress, because they are going to die. You know, to know that you have made those days happy and comfortable. It's a completely different feeling, to any other job I think. I mean, I used to do an excellent job in the dispensary. I used to do billions of prescriptions a day, but I never used to come home feeling like, that I can't believe I get paid to do the job I do. To me, I think it's a great honour almost that I've been invited into these people's homes, and am privileged to be working with them." (P8)

Caring itself made them feel good about themselves, and the pleasure was derived from making others feel good too, not just meeting the care outcomes. Completing the care tasks was gratifying, but being acknowledged for the work they did gave them a sense of pride and made the work worthwhile:

> "Well, not in financial terms, but you get some type of satisfaction out of it, because you are helping people who are not able to do everything for themselves. It's a feeling of satisfaction." (P13)

The motivation to care for others came from these rewarding feelings, whether they were accompanied by an explicit acknowledgment of appreciation or not. The

importance was on being invaluable to someone in some way, with the internal rewards outweighing the external rewards. Satisfaction and feeling useful to someone in such a personal way was self-motivating:

> "I took this one lady out, *X*, and she was lovely, such a lovely lady. And her husband died and we went for a walk down by the river and we sat on the bench. And she told me all about how wonderful her husband was, and how he would look after her up until he died, and she really cried. But it was like, a really positive cry, and after, as we were walking back, she really thanked, so I got really upset. And she said thank you so much for just listening to me, and the appreciation, you rarely, rarely get that, but when you do, you think, that's why I do this job. That's why I do it. Because you know they mean it, you know they really do mean it. Yeah I like little things like that." (P16)

The participants often spoke about themselves as individuals, providing a personal and invaluable service. They talked about how they were not needed by the service user as 'a care worker', but rather as 'an individual' with all they could personally bring to the role. The appreciation felt between the service user and their care worker was considered personal and special to that inimitable relationship. The intensity of the satisfaction experienced came from this appreciation at the individual level.

4.3.3. Prosocial Preferences and Making a Difference

The unique relationship in care work was important to the everyday experience of the work, but there was also a broad prosocial preference among the participants motivating them to engage and remain in care work. Preferences were often expressed for amiable and cooperative relations with others, both in and out of the care work context. Care work also fulfilled the greater desire to make a difference, not just at an individual level, but also at the societal level. Engaging in care work was part of a greater ideological preference for equality, community and harmonious relations with others.

Sociable Relationships

For the care worker and service user relationship to function participants felt that they genuinely had to enjoy their work, and they wanted to socialise and engage with service users and family carers. The participants talked about the preference not to just

communicate with service users and their families on a superficial level, but to enjoy the time actually spent with them:

> "One thing I like most about my work? I think chatting with my clients [laughs], I think that would be it. Yeah, I think that would probably be it. Spending time with them I guess." (P5)

They expressed a preference for work that had a social element and where time could be spent interacting with people, and socializing with people. The direct care aspect of care work made this preferable over other occupations in the same sector. The time actually spent getting to know the individual service user was considered negligible in other occupations. Direct time spent integrating into the service user's life was deemed indispensable to the value of the work they did. For the participants, the time devoted to getting to know service users was what made care work special to them and worthwhile to those receiving it:

> "And for me, what I like is the person they appreciate the most, it isn't the doctor that diagnosed and prescribed them, and it isn't the nurse that's treated them. It's the person who's found out about how they like their tea exactly, and has done it like that. And it's the person who finds out their morning ritual. People have done things the same way for 50 years, and if you take the time out to find that out then they still have quite a good quality of life." (P3)

Social Conscience and Commitment

Participants' descriptions about their general occupational choices, as well as their specific reasons for engaging in care work often revealed a clear ideological view of society and their role in it. Preferences were expressed for occupations where they felt they could give back, or serve society in some way. Talk of previous occupations raised preferences for the responsibilities and roles they had felt made them helpful and useful to others, taking on work that they thought others would not want to do, and wanting to improve situations for everyone:

> "Before I became a care worker I was a pharmaceutical dispenser. And the reason that I went into care work was because, several things were going on in my life at that point. I was quite disillusioned with the dispensary. I'd been doing voluntary work with social care, and when my

> mother was very ill and she actually died, I kind of felt that is was something that I could put back into society." (P8)

Job satisfaction was partly discussed as a consequence of feeling like a worthwhile member of society in some way, favouring the elements of their care work where they felt they could do this. There was an optimistic view about the changes they thought they would make to the lives of others, and the impact this would have on their life as a result. There was also an awareness of the tradeoffs or sacrifices they would be making in order to engage in work they considered rewarding:

> "I think I had this idealistic view that I would come home at the end of the day and think, I've really made a difference to somebody's day, or something [laughs]. And, erm, I kind of thought, that I knew that the money wasn't going to be all that fantastic, and that it wasn't going to be glamour by any means. I knew that there was going to be a lot of basic cleaning and not very nice jobs involved, but I still felt that it would be *something*. Whereas, I had a high powered job, but it never felt like at the end of the day that I had, you know, you hit some target or something, but it didn't actually feel like I was making a difference in my life. Maybe I had this idealistic view that maybe doing a job like this, with the care work, like you've done something worthwhile." (P2)

The participants displayed a social conscience, where they wanted to ensure that everyone was treated equally and fairly, including helping those most in need. A sense of social responsibility emerged in their discussions about care work. A desire to create, or maintain, a society that cares for people was valued by them, and informed their personal beliefs about how a society should behave. A preference for care, or public sector work, over work in other sectors, was one way in which they would express their own ideological viewpoint:

> "Well, personally, I think a principle which I have always stood by is, I believe in civil rights and human rights. And I believe everybody, no matter how big or small, they've got opportunities to be encouraged to take. So maybe coming from an old socialist point of view, from an old socialist background, that's what I take with me into my work." (P9)

Wanting to Make a Difference to People's Lives

A pervasive and prominent viewpoint articulated by most of the participants, regardless of political ideologies, was the desire to make a difference. Some talked about wanting to change the way social care services were implemented to improve conditions for all, but most wanted to make a difference to the quality of life for some. The aspiration to make a difference was motivating, and was either spoken about by participants in their decisions to engage in care work, or in their desire to remain in care work. For some it was expected and inherent in the practical aspects of care work:

> "I think who I am, in that I am very bothered about making a difference to people and making them comfortable, sort of giving them dignity, and that sort of thing. I mean, I get a lot of pleasure out of making other people happy. And I thought if I can actually do something, where I'm actually sort of helping them. It didn't really bother me what I was doing, as in what job I was meant to be doing in that particular day, whether I was sort of cleaning their toilet, or helping them bath, or whatever." (P7)

For others, the difference they could make to someone's life was an unexpected and pleasant surprise:

> "Well, in a way, it is quite shameful that I felt like that about it. That I thought, oh whatever, it's a job. Because it's so not like that when you do it, because, it's so nice to make that difference in someone's life." (P10)

Strong affirmative feelings were associated with their conviction to make a difference, which strengthened their commitment to providing good quality care:

> "So, erm yes, so when I started at the residential home, down the road from here, I did get sort of hooked on the fact that there were some very good carers and some very bad carers. And the amount of difference it makes to somebody's life when you are a good one. And, yeah, it's quite addictive." (P6)

4.3.4. Challenging Perceptions of Care Work

In reflecting on the decision to engage and remain in care work, participants acknowledged the extent to which others influenced their decisions. The participants

often met the challenge of dealing with negative public misconceptions about care work. They also received supportive and encouraging views, usually from those close to them or with a better understanding of the work they do. Importance was given to the supportive and encouraging views they received from others. Challenges were also faced by focusing on religious, cultural, and ideological convictions held about their work, in order to respond to negative perceptions of care work. Those that were approving of their work were often regarded as having a better understanding about care work and what it actually involved.

Cultural and Religious Influences

Religious and cultural practices were attended to for a few of the participants. Where this was the case, it was an apparent feature in reasons for being care workers. For these particular participants though, conflict with cultural and social perspectives about care work were countered by focusing on the integrity they held for their work.

Prominent amongst the South Asian, African and Caribbean participants in this study was the influence of cultural and religious factors on decisions to engage in care work. This sub-theme relates to their experiences of personal religious convictions, which they felt they brought to their work, and the cultural misunderstandings experienced from others in their culture about their work. Both appeared to bear some influence on their occupational choices and reasons for staying in care work, whether to support their occupational choice, or to refute criticisms of it:

> "I'm proud of myself. I'm not bothered what Indian, English people say about it, personally I believe god. I really do believe a lot, so whatever you do good you know and what you do bad, inside you know. That's it." (P1)

For the participants that moved to the UK and subsequently became care workers, discussion centred on challenging disparaging comments they received about care work from members of their native community. They spoke about receiving condemnatory remarks about their occupational choice. Care work was commonly demeaned as a poor occupational choice, on par with being a servant. They felt that care work was perceived as an occupation not worth moving away from their native country for. They

understood these perceptions as culturally bound, and specific to how jobs with similar tasks were regarded in their native countries:

> "Like back home, many people are so bad, because they basically say why do you come to this country to do carer job? To be a carer and to do a care job. So it's like, the way they respond to you about the job, sometimes you find in difficult. But I don't care, I tell people what I do, I don't care." (P4)

> "In the context of my country, they not think it's a good job. They understand it a different way, they serving us, but this meaning is different…" (P12)

One of the participants admitted to sharing similar false impressions before becoming a care worker. Her actual experience of care work in England negated unfavourable comparisons made to similar occupations in her native country, with a greater value given to care work in England:

> "Because I used to see back home in Nigeria, where I'm from, we used to have auxiliary nurses, who aren't thought highly of , so I just assumed the same would be the same over here. Like you have the nurse who are here and you have auxiliary nurse, who are like the carers here. But carers are probably rated higher then auxiliary nurses back home in Nigeria." (P5)

These misconceptions about care work made the participants feel unsupported in their decision to engage in care work. The influence this had on their decisions to remain in care work was discussed as somewhat minimal. These participants considered the opinions of those from their native country as lacking awareness of the complexities of care work, and unaccustomed to the way in which care was provided and regarded in England. Most understood the negative comments they received from others as generally having good intent, suggesting that they held high expectations for what they were able to achieve, and did not understand their choice over occupations they considered more prestigious with better prospects:

> "So I think it might just be something that is locked in their brain, like that's not what we want our child to do. Like, that's not why we brought you up in this world, I would rather my child went to Oxford or Cambridge, or something. Be a lawyer, be a doctor, that sort of thing.

> But they don't see the aspect that maybe you are bringing a smile to a person." (P20)

Other cultural traditions had a positive influence on their decision to engage in care work. Although looking after family and friends was an expected female role in certain cultures, it was also considered an honour by some, and something to be proud of by the participants in this study. They spoke proudly about customs to take care of family and friends as a decent thing to do, something they could share with others through care work:

> "In my country everybody is living with family, sometime their maid is working, but in this country, a lot of old people they are alone. I think, if I'm doing this job, I am doing really well maybe for some people. It is not money, it is not a matter of money. Sometimes I'm thinking, it's not money, a matter of money, it's inside of our humanity. I can bring for another person, if I think this way I feel good." (P12)

Misconceptions and the Devaluation of Care Work

Certain misconceptions about care work were not limited to those from different cultural backgrounds. Most transcended cultural differences and were experienced by all the participants to some extent. Most regularly, this was encapsulated in the participants' frustration with care work being perceived as 'just a job', or they themselves as 'just care workers'. The underlying view this brought to light was the concern that care work was not regarded as a career, but as a means of earning money; an opinion that was not mirrored by the participants' own view of the work they did. They felt that care work was belittled and misunderstood by most, and were perturbed that it was degraded as work that could be 'done by anyone':

> "I had someone the other day, because we're being re-mortgaged, and he said to my husband oh and you're so and so, and to me, so you're *just* a carer. Yeah, just a carer, then normally I say yes, I'm just responsible for the feeding, clothing, [and] social life of a human being, that's all." (P6)

Misconceptions about care work were rooted in a limited understanding of what the work entailed, and the level of skill required to do care work. From the comments frequently received from others, most participants felt they were solely perceived as providing personal care tasks such as bathing and toileting:

> "And people, yeah, they think it sort of, that caring is just like changing nappies and washing old people, like. That's it and, it just really annoys me. They think you don't do anything, you just sit around and it just really irritates me." (P16)

The participants felt that others perceived care work as an occupation with limited scope, full of degrading tasks. Little thought or consideration was given to the interesting and emotionally rewarding aspects of their work. Concern was expressed about the view of care work by others as a menial job, with poor pay and conditions, with the assumption that those engaging in it were lacking the ability to do anything else. They disliked being perceived as unqualified, unskilled and lacking intelligence, which devalued the aspects of the work they considered important and worthwhile:

> "Once, when I was in the place I used to live, somebody saw me in the uniform and said, ah I didn't know you were a nurse? No, I'm a carer I said. And she said, just a carer, and I said yes. I mean, obviously I haven't got a career, I haven't gone to university, and I think that people think, oh it's just a carer. It's just a cleaner. It's just a bar maid, things like that. It's like one of those other jobs that anybody can do. Anybody without any skills or studies can do." (P17)

> "Oh, like, just a carer, just a support worker. There's no such thing as just, it's a very important job. And, if you think, all across the country if all the carers and support workers just stopped work, than the country would be in a huge mess. So it's a very important job." (P8)

Supportive Views about Care Work

These negative misconceptions devalued the way the participants felt about their work on occasion, but solace was found in the supportive and interested views of those whose opinions mattered to them the most. Although the encouraging comments from others were intermittent, they were heartening to the participants nonetheless and gratefully received.

The participants felt that those most supportive of their work were those close to the care worker and service user relationship. These were usually the family and friends of either the service user, or the care workers. Their proximity to the caring relationship made their opinions notable to the participants, as they were seen as most likely to

understand the full picture of what their work entailed, and in particular, the difference their work could potentially make to someone's life:

> "We do get some positive comments, like some of our clients when they like, you do get their families like, you get appraisal from them you see. But, it's like, always the outsiders on the negative side. Like if you tell them that I'm doing caring job, they will be like, this is not the sort of job you want to do, like for the rest of your life. And I'm like, that's not your problem. It's my business, so mind your own business." (P15)

The ability to understand what their work necessitated made the support they received all the more valuable:

> "Oh yeah, well, like my neighbours and some relatives, and *X* does, my boyfriend. Yeah, my sister. Yeah, yeah, they do. But that's people who know me, and know what I do. Like yeah, they are all really proud of me, like my parents are really proud of me." (P13)

The positive 'insider' views of the care worker and service user relationship, usually from the families and friends of both, focused on an appreciation for what care work involved. Somewhat more rarely, the participants noted positive remarks made by those 'outside' of the care worker and service user relationship. These were often made in the context of admiration for being able to do something they themselves felt that they could not do, the assumption being that the participant must have a good temperament in order to do care work. Again, the participants felt that this opinion came from a lack of understanding about what was required in care work. However, they were largely pleased that the specialised nature of their work was being acknowledged, as opposed to being considered as just a job that anyone could do:

> "It depends on what setting I am in. Well, the older generation think you are very nice person, aren't you sweet, that sort of thing. Some people though, see it a just a menial job, kind of thing. Well I think it depends on the setting, but most must think she must be an angel. I wish." (P5)

> "Some of them are like oh, I couldn't do that, I couldn't do that. And some of them say that I really admire you, for doing that because I couldn't do it." (P10).

4.3.5. Care Work and the Practical Benefits

This final theme focused on the more general considerations participants' deliberated over when making any occupational decision. Some of these were specific to care, for instance, personal care obligations outside of work had to be satisfied before they felt they were able to take on any other care responsibilities. However, most of the considerations were more general to taking up and remaining in any occupation for a significant amount of time. These included: the need to earn money, career development opportunities, and maintaining a good work-life balance. Both the general and specific practical benefits were motivating, and usually had an influence on when and how individuals were able engage in care work.

Fitting in with Other Care Commitments and a Personal Life

It was important to the participants that care work fitted in with their other social and care commitments. They recognised that fitting care work around a social and personal life was often impossible, accepting that flexibility of work hours also brought with it inconsistency and the inability to plan ahead, particularly when on a weekly or fortnightly rota. Participants discussed having to miss family occasions, Christmases and birthdays, due to the short notice given on scheduled shifts. However, most spoke about how they had come to expect this with care work, and had come to accept the unsocial hours, and had even adapted to them in some cases:

> "I've had to work around it quite a lot. I mean it was not convenient. And now, for the first time it is, because my daughter's at nursery two hours a day and my husband's home at five. So I have evenings and a few hours here and there. It's the only thing that does fit around it. I mean a lot of people in my position are having a lot of difficulty getting jobs to fit round that, but." (P12)

Others felt the flexibility in the shifts allowed them to have a personal life:

> "Sometimes you work nights sometimes you work days, so you've got some time to yourself so I can't say that it interferes with my private life, or my family life, like that." (P3)

The participants were flexible when it came to working unsocial hours, and became accustomed to adapting their social lives around their care shifts. However, this level of adaptability to care work was restricted when it came to their personal care commitments. The participant spoke about prioritising their child care needs and other care responsibilities over paid care work, trying to fit paid care work around these responsibilities and not the other way round. On occasions where they had to choose between care work and personal care commitments, the latter took precedence:

> "I've given them notice when she starts school in January, my notice for evening work. I'm hoping I'll find more daytimes..." (P6)

> "Although, originally, I said I only want to do a certain number of hours, and now that's increased, and this sort of thing. And I am still happy with the number of hours I'm doing, although it has increased, and they still ask for more, so I've found it does fit it. And because one of my things was during school holidays and that, I still want to spend a lot of time with *X* [my son], and because they are an agency, they are fine with that. I mean you don't get paid for your holidays, so you just pretty much take what you want." (P7)

The time available for child care and other care commitment was inevitably limited whenever there was a need to earn money. In certain cases, the flexibility in care work was often more accommodating to such care commitments, making it preferential over other types of employment:

> "I used to work for a building society, as a mortgage and investment adviser and then as a manager of the branch. And the reason why I finished doing that is because I had *X* [my son]. I went back for a year after having *X*, but found it too difficult to balance that work with dropping *X* to the nursery and that sort of thing." (P7)

The participants spoke about the unsociable working hours associated with care work, as often a hindrance to time available for more personal and social activities. However, they also recognised that this was not the only limiting factor on their time. Other factors equally impeded the time available to relax and engage in personal activities. Factors such as studying, or running a household, also limited the time they felt they had available, and these could also clash with time for their children and caring within the family:

> "But I don't have much of a social life anymore. I used to spend a lot of time with my friends, but I don't anymore. I hardly get to see any of my friends. That's just the down side, but that's not just care work. But that's just work in general. There's school and that, so I have less social time than I would anyway now" (P5)

Career Development Opportunities

Some of the participants were also motivated by the long term prospects for career progression. They praised the constant training and experience they gained in their work as useful and increasing their confidence and proficiency at work:

> "Benefit is when you can study further, NVQ 2, 3, and 4 you can become a manager, if you study more, or you can be a team leader. It makes you go senior, senior, senior, that's what happens in it. The more you go into it, the more you can pick up and be senior… Like if I wanted to do a job caring I would go for it. Yeah, because I've got more training, more experience, and I can get it like that." (P14)

The specialist training was seen as crucial to the practical aspects of their work, which become even more evident when they faced service users with complex packages of care:

> "I have gained lots of skills. I know about, have learnt about peg feeding, intermittent catheter for both male and female and how to insert it. I know how to manage their health, if they go catatonic I know what to do. I have only done suction once, so I don't think I'm not very experienced at that. I know about how to do the massage and the exercises they are supposed to do. I know about moving and handling them. What else; ventilation, I know about that and pressure sores, how to relieve that, skin management, the whole thing to do with spinal cord injuries." (P2)

The training and experience gained by the participants highlighted to them the potential for care work as a stepping stone to others careers, such as nursing and social work. They discussed the options to expand their knowledge base and to branch out into other health and social care professions. This motivated those who lacked the qualifications to enter directly into nursing or social work, but were hoped to gain qualifications and experience whilst engaging in care work to progress through that route:

> "Yeah, but, even back home I've been doing one year voluntary work in the hospital as well, as a health care assistant. And when I came here, I wanted to do nursing, but as it was like, a bit like difficult for me to get into it, so I just dropped and got into caring job straight away. But if still I want to go into nursing if can, I will, yeah." (P15)

4.4. Discussion

In this chapter interviews with care workers were analysed to identify care workers' motives for deciding to engage in, and remain in care work. Thematic analysis of the interview transcripts uncovered how and why these care workers accounted for their decisions to engage in care work, what motivated them to stay in care work, what they found challenging and difficult about care work, and how care work fitted in with the rest of their life decisions and relationships with others. The descriptive accounts of these decisions and experiences were reflected and organised into five related themes: (i) care work as a propensity and identity; (ii) close relationships in care work; (iii) prosocial preferences and making a difference; (iv) challenging perceptions of care work, and finally; (v) the practical benefits of care work. Together, they give an insight into what is currently missing from the literature: who care workers might be and what motivates them to engage and remain in care work.

The first of these themes, care work as a propensity and identity, partially counters the view held by Himmelweit (1999) that the activity of caring and the motivation to care comes from a relationship being developed between the individual care worker and the recipient. For Himmelweit, social expectation is the initial reason for engaging in care work, with the motivation to care and the identity of being someone that cares both subsequently emerging and developing as an upshot of the care worker and service user relationship. However, within this interview study, the initial motivation and identity as someone who cares for others precedes the development of a relationship with service users, and offers an alternative to the social expectation explanation for deciding to engage in care work. The care worker and service user bonds subsequently provide a strong motive to remain in care work, as reported by Himmelweit and supported by the findings from the second theme in this study, 'close relationships in care work'.

Motivations for deciding to engage in care work appear to be more complex than the result of social expectations.

Those interviewed considered that the qualities care workers possess make them capable and 'good' at caring for others. The ability to 'truly' care for someone was considered as a propensity, a collection of traits, stable and consistent over time and in multiple contexts, and most importantly, predating their occupational choice to engage in care work. Several pre-existing characteristics were discussed as requirements suitable for care work including: patience, tolerance, understanding, respectfulness, sensitivity, empathy, loyalty and honesty. Prerequisites, such as adaptability and the ability to perspective take, were considered essential to the work and inherent in performing the tasks required. Caring was not limited to their work, switched on and off to suit their occupation, but an extension of a greater inclination to seek and remain in caring relationships. These noted characteristics were consistent with those identified in previous studies with other health and social care professionals and trainees, which reported their motivations for helping others in an occupational context (Hojat et al., 2005; McManus, Livingston & Katona, 2006; Miers et al., 2007; Parker & Merrylees, 2002).

The common dispositional characteristics that arose in these interviews were consistent to those noted in other health and social care professionals, such as empathy, and tendencies towards prosocial and agreeable behaviours, and could be theorised as capturing a mutualistic cooperative strategy for those motivated to seek employment as a care worker. Under the 'care work as a propensity and identity' theme in this study, care work was often described as something they had always done and valued. Caring was personally owned and was identified by care workers as being part of them, who they are, and how they see themselves in relation to others. Previous experiences of caring for others in their lives were often cited as influential for their decision to engage in care work. A desire and capability to help others was considered natural and innate, something one was 'born with'. Comparisons were made between caring as a predisposition and 'superficial' or disingenuous forms of caring for others, with 'true' care workers needing to possess the former to remain in care work. Dispositional characteristics, specifically empathy and agreeableness, provide the proximate

mechanisms needed to effectively care for others, and are consistent with what one would expect if an individual was to gain from mutually beneficial cooperative encounters (de Waal, 2008; Nettle, 2006, 2007a; Trivers, 1971).

The association between motivation, personality, satisfaction and the capability to perform well at work has been evidenced elsewhere with female nurses. Those that were driven by the need to help others, scored higher on empathy, social competence (Lewis, 1980), and reported higher long-term job satisfaction, with better performance at work (Riggio & Taylor, 2000; Sand, 2003).

Moving onto the second theme, as suggested by Himmelweit (1999), the relationships that develop in care work motivate the commitment to remain in care work; a finding consistent with a smaller interview study in England (Ryan et al., 2004). Within the current study, participants indicated that the proximity and intimacy of the care worker and service user relationship inevitably resulted in the formation and maintenance of personal relationships. In part, this could be seen as a consequence of the general caring identity they nourished in all their relationships in and outside of work, as noted in the first theme of this study, 'care work as a propensity and identity'. However, the personal nature of relationships that developed in care work, were discussed as emotionally rewarding, significant, worthwhile, and reinforcing the commitment to care.

However, managing the professional and personal friendship aspects of these 'unique' relationships between care workers and service users required considerable balance and the maintenance of boundaries. Piercy (2000) found something similar, noting that care workers report a cognitive process of setting boundaries in their interactions with service users in order to avoid overdependence from either party. Distinguishable from an entirely professional and an entirely personal relationship, the preservation of some emotional distance was required when faced with continual feelings of affection and compassion. The personal commitment to care for service users was considered emotionally rewarding and a motivating aspect of the work in this study and others (Ball et al., 2009; Piercy, 2000), but it was not without its costs, especially when professional care relationships ended due to a sudden change in circumstances or the

service user's deteriorating health. Conflicts existed in the boundaries and limits of when and how to care, with care workers struggling to balance these relationships on occasions. Ultimately the relationship with another individual, despite the emotional costs, motivated care workers to continue providing care, as did the feelings of satisfaction arising from fulfilling their professional obligations to the service user.

Despite the risk of personal costs, support for the continuity of a caring relationship featured as a motive for remaining in care work. Examples have been given in previous studies of paid care workers forming attachments with service users, with this resulting in them extending their care responsibility outside of the contacted hours (Aronson & Neysmith, 1996), or in the reluctance to change service users once bonds were formed (Challis & Davis, 1986). The relationships encountered in care work have also been identified in survey research amongst care workers as a prime reason for remaining in care work (McClimont & Grove, 2004).

Part of the personal commitment to caring for service users was linked to the achievements and outcomes reached by service users with the assistance of care workers, which would otherwise be impossible. In this study the preference for positive prosocial outcomes and making a difference were acknowledged as motivating factors for engaging in and remaining in care work. Making a difference and prosocial relationships in care work have also arisen in the findings of other interview studies (Ball et al, 2009; Ryan et al, 2004), although not in direct relation to ideological motivations, but through satisfaction and rewards. In this study, motivations for engaging and remaining in care work were substantiated in preferences for prosocial ideologies and behaviours, which included and transcended individual relationships. The interviewees expressed a desire to make a difference at the societal level, as well as at the individual level. A penchant for ideologies committed to improving social conditions and greater social cohesion was advocated in the decision to engage in care work. However, prosocial proclivities were mainly discussed in terms of behavioural displays, rather than in purely ideological terms for most.

Commitment and enjoyment of sociable relationships with service users and their families was expressed as a motivating aspect of care work, as well as participating in

work that was compatible with their social conscience. Wanting to make a difference to the lives of others was associated with strong affirmative feelings for involvement in care work. Whilst the first theme, 'care work as a propensity and identity', highlighted the dispositional traits essential to care work and the ability to care for others, the theme, 'prosocial preferences and making a difference', highlighted the enjoyment and commitment to the social aspects of care work. In essence, for the ability to care to be maintained, it must be coupled with an enjoyment of the act of caring. The ability to care *for* must be accompanied with the ability to care *about* the service user.

A prosocial motivation amongst care workers would also partly account for the higher proportion of females and older workers in care work (Hussein, 2009, 2010, 2011b; Skills for Care, 2007, 2012). Experimental games have indicated a greater female preference for more socially orientated, rather than individually orientated outcomes (Andreoni & Vesterlund, 2001; Eckel & Grossman, 2001; Eckel & Grossman, 2008). Females also tend to be more sensitive to situational cues, and to adjust decisions based on these particular features in order to protect relations between group members (Eckel & Grossman, 1996). In addition, prosociality appears to increase with age, suggesting a preference for more cooperative and equal outcomes with age (Van Lange et al., 1997). These preferences for establishing prosocial relationships with others and upholding these relationships are characteristic of occupational care giving, and further explicate the over-representation of females and older workers in this field.

From the first three themes in this study, what first motivates someone to engage in care work may differ from what motivates them to remain in care work, but motivation for both manifest in a cooperative strategy. Individual differences in dispositional traits appear to promote a form of situation selection (Nettle, 2007a). Those possessing certain dispositions and preferences associated with cooperative behaviours may be motivated to seek opportunities, situations and relationships where these behavioural tendencies can be used to greatest effect. As in previous qualitative studies, the close relationships in care work were regarded as an important motivating factor for remaining in care work (Ball et al., 2009; Piercy, 2000). Reinforcing the commitment and propensity to provide care and help to others, prosocial preferences and enjoyment

in the social aspects of the work motivated care workers to be satisfied and rewarded in their work (Ryan et al., 2004).

In addition to these themes, the fourth theme from this study, challenging perceptions of care work, identified the need to defend care work, to feel respected, and for care work to be valued by others. This finding differs from previous accounts of the most challenging and dissatisfying aspects of care work. Reflecting on the aspects most disliked in care work, care workers in previous studies listed the cleaning aspects of personal care, difficult and abusive behaviour from service users, and the death of service users as the most difficult aspects to the work (Hall & Wreford, 2007; Penna et al., 1995). In the current study concern for devalued perceptions of care work by others showed some accordance with the negative views of care work held by the public, as reported in focus group research on the unappealing aspects of care work (Research Works, 2001). The positive perceptions of care work from this study, and also those in the aforementioned focus group study, functioned to negate the broader lack of respect for care work. It was generally viewed as a positive vocation, fulfilling an important role in society, with care workers perceived as motivated by doing good. Those with an understanding of the work, and those within the inner circles of the care worker and service user relationship, tended to hold supportive and positive opinions of the occupation. They were also more likely to have an informed opinion of what the work entailed, according to those interviewed in this study.

The practical benefits of care work were also considered motivating in decisions to engage and remain in care work. Fitting work in with other care obligations and personal commitments was a practical need for most. Benefits such as career development and the need to earn money seem to be more generic to any occupational choice. The specificity of the relationship in care work, which was reported as an area of personal satisfaction and motivation within this study and in previous studies (Ball et al., 2009; Piercy, 2000), held a greater influence on the experiences of the work. Personal care commitments invariably took precedence over work commitments, and flexibility and unsociable hours were considered beneficial for those with care commitments outside of work.

In summary, the findings from this interview study and others appears to suggest specific motivations for engagement in care work, which may not be the same for individuals in other low paid occupations. In a survey of over one thousand low paid service sector workers in supermarkets, hotels and fast food chains, overall job satisfaction with work was associated with short-term rewards such as pay, and long-term prospects such as good opportunities for promotion. Social relations with co-workers and others, as well as acceptable work demands were secondary to overall satisfaction at work in relation to short-term rewards and career prospects, which were identified as the key determinants (Brown & McIntosh, 2003). In contrast, care worker motivation and satisfaction within this study suggested a departure from this, with greater emphasis placed on rewards related to social interactions at work. Career opportunities featured less in the literature on care worker satisfaction, with the care workers that remain in the job doing so regardless of the low pay (Ball et al., 2009; Hall & Wreford, 2007; Piercy, 2000; Penna et al., 1995).

If care workers are distinct from other low paid workers in their motivations for work, this may have implications for the way policy attempts to address issues of recruitment and retention. Recruitment should be centred on individuals with dispositions and preferences associated with enjoyment and investment in mutually beneficial encounters that simulate friendship. Retaining care workers will depend on fostering the relationships with service users and their families for mutual benefit; this may entail changing care worker and service user dyads where this is not working. Promoting the prosocial aspects of the work, the flexible working hours, the responsibility and independence in the work, in advertising campaigns may attract those possessing such proclivities. But first, before clear suggestions can be made, further evidence is needed to assess whether care workers do actually differ in dispositions and preferences to others, from similar socioeconomic circumstances, in consistent ways. Currently, no study has sought to assess for differences between care workers and others on dispositional and situational grounds, partly because it has been unclear what to assess for until now.

Commonalities noted in the literature review (Chapter 2) and the interviews with care workers in this study, should be the starting points for making predictions about why

individuals decide to engage and remain in care work. In essence, motivating themes centred on personal attributes, prosocial preferences, demographic, and situational factors considered apposite to care work. The care workers that participated in this interview study were motivated by several factors when deciding to engage and remain in care, some of which had a greater influence on certain subgroups in this sample than others. The main findings suggest that care workers perceived individuals possessing certain traits as being motivated and more suitable for care work, based on personal attributes and prosocial preferences. In addition, the internal rewards of the relationship between service users and care workers, and the desire to make a difference motivated care workers to remain in care work, suggesting a prosocial preference prior to care work. Care workers faced challenging negative misconceptions about their work, and sought encouragement and motivations from those close to them and the care situations, as well as from their personal convictions. External benefits were also motivational for remaining in care work; payment, flexibility and personal care commitments needed to be met for some to remain in the work.

In addressing the secondary aim of this study, care workers appear to be adopting a mutually beneficial social strategy, with social support benefits derived from the unique social relationship in care work. Additional benefits may also be gained from the flexible hours and other aspects of the work, but the social relationships in care appear the most motivating and rewarding. Care work is presented within this study as a relationship of mutual cooperation, where care workers care *for* and care *about* the service users they interact with, and are willing to do this for poor pay and in spite of the challenges associated with the work.

In Chapter 2, proximate psychological mechanisms enabling this social strategy were identified, such as empathy and agreeableness, to explain how individuals engaging in care work behaviours in contemporary contexts may derive fitness benefits from this behaviour. The interviews in this study support the theoretical proposal that these dispositions are crucial to care work. This thesis argues that the preference for care work, over other occupations, could be capturing individual preferences for forming social alliances, with the willingness to tolerate a low wage. The value gained from

forming social alliances at work may offset the lower wage and compensate the negative aspects of the work.

In the next chapter (Chapter 5), a measure will be developed which will be informed by the subjective experiences of paid care workers in this study, as well as the literature on motivations and traits associated with decisions to engage in more general care giving behaviours from Chapter 2. The aim of the study in Chapter 5 will be to develop a psychometric measure appropriate for assessing individual differences associated with cooperative behaviours, such as empathy and prosocial outcomes, which are also likely to be associated with successful participation in care work. The developed measure will be based on the personality traits, demographic and situational factors identified as being associated with a preference to engage and remain in care work. The desire for prosocial preferences will be further assessed separately in a deconstructed economic game in Chapter 6, where the measure developed in Chapter 5 will also be administrated to care work and non-care worker samples matched at a similar socioeconomic status.

5. Development of a measure to assess for associations with care work

5.1. Introduction

In the previous chapter, an inductive semantic thematic analysis explored the motivations and psychological processes underlying the subjective experiences and decisions involved in engaging and remaining in care work. This exploratory study aimed to shift the focus away from idiosyncratic accounts of individual care workers, focusing instead upon the emergence of commonalities in the experience of care work and the influences that led to them engaging in and remaining in care work.

Commonalities in dispositional and prosocial preferences noted in these interviews seem to support the view of care workers as mutualistic cooperators, strategically seeking out and engaging in working relationships they regard as mutually beneficial. The corresponding emotional states and feelings of reward described in these interviews served to motivate mutualistic cooperation with others (Trivers, 1985). As previously noted, helping in an interaction with a stranger can signal the desire for a trustworthy mutually beneficial alliance to form, with the potential benefit of a friendship being established as a by-product (Trivers, 1971). Common experiences in care work appear to support the possibility of friend- and family-like relationships developing between service users and their families (Ball et al., 2009; Hall & Wreford, 2007; Himmelweit, 1999; Leece, 2006; McClimont & Grove, 2004; Meagher, 2006; Ryan et al., 2004).

In the cooperation literature, empathy has been considered as a psychological mechanism directed to trigger the benefits of cooperation and motivating help to others (de Waal, 2008; Kenrick, 1991; Preston & de Waal, 2002). Empathy, and particularly the enhanced sensitivity to the needs of others and the ability to perspective take, was mentioned by the majority of the care workers interviewed in the previous chapter both in relation to the suitability of people for care work, and in their own motivations for the work. Facets of agreeableness also emerged in the interviews with care workers. This personality domain has particular pertinence for individuals adopting a mutually cooperative strategy. High agreeableness endows benefits, such as more harmonious

social relationships and the advantages arising from good social support networks (Nettle, 2006, 2007a).

As noted in the previous chapter, further evidence is needed to assess whether care workers do, in fact, consistently differ in dispositions and preferences compared to others for similar socioeconomic circumstances. Currently, no study has sought to assess differences between care workers and others on dispositional and situational grounds, partly because it has been unclear what to assess until now. The aim of this study will be to develop a suitable measure to assess individual differences associated with participation in care work. This chapter will identify the characteristics pertinent to satisfaction and success in care work and will produce a questionnaire to assess these, which will be administered to care workers and non-care workers from a similar socioeconomic background (Chapter 6).

The themes identified in the previous chapter, together with the literature reviewed in Chapter 2, provided a basis for the conceptualisation of characteristics likely to be associated with deciding to engage and remain in care work. Motivating themes centred on personal attributes, prosocial preferences, demographic, and situational factors considered apposite to care work. Certain dispositions were considered inherent in behaviours prior to engagement in care work. They were considered fundamental to effectively caring for others: empathy, patience, tolerance, sensitivity, loyalty, honesty, and respectfulness were some of the traits identified. The ability to take the perspective of another person and adaptability to the needs of others was regarded as prerequisites to being a 'good' care worker. The desire to make a difference, and the preference for working in prosocial environments motivated care workers to remain in care work. Care work was not without its emotional costs; care workers often faced challenging negative misconceptions regarding their work, highlighting sensitivity towards how they were perceived by others and the influence this had on decisions to remain in care work. Religious, cultural and ideological perspectives were motivations for some, as were previous and current care giving responsibilities outside of paid care work. General occupational considerations also emerged as reasons for engaging in care work, especially for women with other personal care obligations and child care commitments outside of paid work.

In order to incorporate the experiences of paid care workers from Chapter 4, along with the literature on motivations and traits associated with decisions to engage in occupational care giving behaviours and cooperation more generally from Chapter 2, this study will develop a psychometric measure appropriate for the assessment of individual differences associated with participation in care work. The developed measure will be based on the personality traits, demographic and situational factors identified as associated with participation in care work. Where possible the development of the measure uses reliable and valid personality items pooled from standardised scales and subscales. Principal component analytic techniques will be applied to the pooled items to reduce the number of items into coherent subsets that are relativity unidimensional and potentially associated with care work in a meaningful way. A typically developed adult population will be used to assess for internal structure, reliability and construct validity of the resultant refined subscales, as well as correlations between subscales and key demographic factors. The sample within this study will also be used to pilot the demographic and situational items developed for their possible association with care work, to check their suitability in capturing the range of possible responses.

5.2. Methodology

5.2.1. Scale Development

Development of the measure to assess for ‘associations with care work questionnaire’ was based on the previous literature outlined in Chapter 2 and previous qualitative findings outlined in Chapter 4. The measure was formulated in two parts. The first was the construction of demographic and situational items potentially associated with the decision to engage in care work. This was developed in separation from the second part of the measure, which pooled items from pre-existing standardised dispositional scales to construct a measure to assess for attributes potentially associated with care work.

Demographic and Situational Items

The majority of the care workers that participated in the qualitative study were: female, aged between 27 and 39, cohabiting with a partner, had at least one child and were born outside of the UK. The sample was ethnically diverse, with no single ethnic group markedly over-represented in the sample. In addition, the sample incorporated both native and foreign-born individuals. This sample fits wider quantitative accounts of the predominance of females in care work, specifically those aged between 20 and 49 (Hussein, 2009, 2011b; Skills for Care, 2007, 2012), and an increased trend towards foreign born care workers in the UK, particularly from countries in Eastern Europe and sub-Saharan Africa (Cangiano et al, 2009; Hussein, 2009).

Items were developed to record sex and ethnic group as categorical responses. Age, country of birth, country mainly educated in, and highest educational qualification items were also developed and formatted as open response items.

In addition, the themes derived from the qualitative study in Chapter 4 raised situational and demographic factors potentially associated with motivations for engaging and remaining in care work, such as: religious affiliation; care responsibilities and commitment to others outside of paid care work; the need to earn money; and career progression through vocational training and qualifications.

Categorical response items were developed to record religious affiliation and relationship status. Open response items were developed to record number of children, age of children and legal parental status or relationship to the children listed. To ascertain the level of other care commitments, open response items were developed to record whether regular support or care was provided to anyone other than their children, what the relationship was to those specified, how long the care was provided for and the nature of the care provided. Open items were also developed to record current main occupation, period in current occupation, and parents' main occupations to assess for socioeconomic background and current occupational status. Development of the demographic and situational items was treated independently of the dispositional items in the internal reliability and validation process, and assessed separately in the logical analysis.

Dispositional and Personality Items

Themes identified from the qualitative analysis in Chapter 4 related specifically to personality traits and dispositions that were considered as motivating factors for engaging in care work, or inherent to performing well in care work. Pre-existing standardised measures with good construct validity and reliability were selected to cover aspects identified in the first four themes of the qualitative study: care work as a propensity and identity; balancing relationships in care work; prosocial preferences and making a difference; and challenging perceptions of care work.

Empathy Scales

Certain dispositions were considered inherent in care workers' behaviours prior to engagement in care work, most notably empathy in both the affective and cognitive sense of the construct. Sympathy, compassion and the concern for others were often discussed in relation to balancing relationships in care work. Perspective taking and considering the needs and feelings of others were discussed explicitly as essential prerequisites for becoming a care worker under the 'care work as a propensity and identity' theme (Chapter 4), a finding consistent with previous research on perspective-taking in caregivers (Lobchuk, 2006). Based on this rationale a multidimensional measure of empathy was sought to measure the dispositional aspects of emotional and cognitive empathy.

The empathy measures selected were two subscales taken from the Interpersonal Reactivity Index (IRI) development and validated by Davis (1980, 1983a), Empathic Concern and Perspective Taking. The full IRI consists of 28 self-report items covering four subscales representing separate constructs of empathy that are considered related but conceptually distinctive from each other. The seven item subscales were: Perspective-Taking (PT) assessing the tendency to take the view points of others; Empathic Concern (EC) assessing the inclination toward other-oriented feelings such an sympathy for others; Fantasy Scale (FS) assessing the capability to envisage and transpose oneself into the feelings of fictitious characters; and Personal Distress (PD) assessing the inclination towards self-oriented feelings of distress in response to

interpersonal situations. Standardised alpha coefficients were reasonable for the subscales, ranging from .70 to .78, with estimations of reliability through test-retest producing moderate temporal stability (Davis, 1980).

Items from all the subscales were examined for face validity and relevance for assessing the dispositional aspects of emotional and cognitive empathy in relation to 'real world' behaviours in general settings. The FS subscale was excluded as the items focused on imagination and connecting with fictional (non-real) characters, for example *'When watching a good movie, I can easily put myself in the place of a leading character'*, which differs from the real world encounters of care giving. The PD subscale was also excluded as the items centred on the inability to cope in emotional situations, for example *'I tend to lose control during emergencies'*. Personal distress as conceptualised for this scale was counter to the patience, coping capabilities and responsibility required in care work. Care workers may be more likely to encounter emotional situations in their work than if they were in a non-care sector occupation. They may be inclined to respond to such items drawing on experiences from work, as opposed to drawing on general experiences from numerous settings, differentiating them from other non-care sector workers on occupational experiences, but not on dispositional qualities as was intended in the development of this measure. In addition, personal distress reactions have been noted in the literature to correspond with low levels of helping in emotional situations (Eisenberg & Fabes, 1990).

The PT and EC subscales related well to the aspects of general care giving in real world situations beyond care work, with items that constituted well with general understandings of empathy as both cognitive and affective (Davis, 1983b; Davis et al, 1999). The PT subscale included items such as *'I try to look at everyone's side of a disagreement before I make a decision'* and the EC subscale included items such as *'I have tender, concerned feelings for people less fortunate than me'*. The items in these subscales focused on attributes, as opposed to actual behaviours that could falsely differentiate care workers based on their occupational experiences, instead of their dispositional qualities. Internal reliability coefficients were reasonable for the subscales, with standardised alphas ranging from .75 to .78 for PT and .70 to .72 for EC. The complete list of items and original response format for the Empathy measures can be found in Appendix 7a.

Agreeableness

Dispositions other than empathy were considered essential for effective engagement in care work. Under the themes 'care work as a propensity and identity', and 'close relationships in care work': patience, tolerance, sensitivity, loyalty, honestly, respectfulness, and adaptability to the concerns and needs of others were some of the qualities specified. These dispositional qualities share certain moral and behavioural inclinations towards interpersonal interactions, which have relevance both in and outside of care work. Patience, tolerance, respectfulness, and adaptability to the concerns and needs of others suggested a habitually compliant and cooperative temperament. Loyalty and honesty indicated a trusting nature and a belief in the good intentions of others. Sensitivity towards others pointed towards tenderness and kindness in interactions with others. Personal qualities such as being compliant, trusting in others and tender-mindedness are all facets of the broad *Big Five* personality trait of Agreeableness (Costa & McCrae, 1992). This is a multidimensional construct concerned with interpersonal tendencies towards consideration and helpful actions towards others, with the belief that others will reciprocate in a helpful manner too. Aspects of agreeableness were more explicitly addressed in the 'Care work as a propensity and identity' theme, as an inclination to seek and remain in caring and considerate relationships with others.

Broad personality trait measures such as the factors of the *Big Five* (Costa & McCrae, 1992) are likely to influence how individuals respond to situations and the activities they decide to engage in. Furthermore, evidence suggests associations between these personality factors and the occupational choices individuals make (Costa, McCrae & Holland, 1984). Individuals high in agreeableness are often considered as preferred social partners for their trustworthiness and cooperative behaviours (Costa & McCrae, 1992). Empirical evidence has indicated a slight but consistent sex difference in the agreeableness domain (Costa, Terraciano & McCrae, 2001), with females scoring higher, which could relate to the high proportion of females in care work. Based on the rationale that care workers identified feelings, thoughts and actions akin to the facets of agreeableness, a multidimensional measure was sought to measure the dispositional facets of agreeableness.

The Agreeableness measure selected was taken from the UK version of the Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992). The manual and certain scale items have been adapted (Rust & Lord, 2006) for greater relevance to UK users and validated with samples from the British working population, the intended respondents for the scale developed in this research. The Agreeableness domain of the NEO PI-R consists of 48 self-report items covering six facets to encompass the scope of the domain in a broad sense, allowing for meaningful individual differences to be observed even within the domain. The eight item subscales are: Trust (A1) assessing the belief others are well-intentioned; Straightforwardness (A2) assessing sincerity and ingenuousness; Altruism (A3) assessing willingness to help others; Compliance (A4) assessing preference for cooperation and reluctance to interact aggressively; Modesty (A5) assessing self-effacing tendencies; and Tender-Mindedness (A6) assessing sympathy and sensitivity to the needs of others. Standardised alpha coefficients have been shown to be reasonable for the Agreeableness domain (.87) indicating good internal consistency across facets, with estimations of reliability through test-retest producing substantial temporal stability for extended periods (.92). Convergent and discriminant validity and peer ratings have indicated good construct validity for the Agreeableness domain (Costa & McCrae, 1992; Costa & McCrae, 2006; McCrae & Costa, 1987; McCrae & Costa, 1990; Rust & Lord, 2006).

Items from the six agreeableness subscales were examined for face validity and relevance for assessing behaviours in general settings. All subscales focused on attitudes, as opposed to frequency of actual behaviours. Measurement of actual behaviours could falsely differentiate care workers based on occupational experiences, instead of dispositional qualities. Items related well to aspects of agreeable and cooperative behaviours in general situations. A1 included items such as *'I believe that most people are basically well intentioned'.* A2 and A3 contained items such as *'I'm not crafty or sly'* and *'I try to be courteous to everyone I meet*' respectively. A4 consisted of items such as *'I would rather cooperate with others than compete with them'*, A5 included items such as *'I try to be humble'* and A6 contained items such as *'Political leaders need to be more aware of the human side of their policies'*. Some of the items in the last tender-mindedness facet appeared to have potential overlap with the

empathy measures selected for inclusion. The analysis of internal structure investigated this further in the findings section of this chapter.

Previous analysis of the standardised alpha coefficients for the facets has indicated satisfactory internal reliability, ranging from .58 for tender-mindedness to .82 for trust. Test-retest as an approximation of reliability ranged from .78 for modesty to .88 for compliance (Costa & McCrea, 2006). A complete list of items and the original response format for the Agreeableness measure can be found in Appendix 7b.

Social Dominance Orientation

Under the theme 'prosocial preferences and making a difference' identified in Chapter 4, the desire to make a difference and the preference for working in prosocial environments motivated care workers to remain in care work. A preference for prosocial values and attitudes characterised care worker motivations both in and outside of work. Egalitarian political and ideological positions discussed under this theme were indicative of a disposition towards greater social and economic equality and fairness. The Social Dominance Orientation measure (SDO; Pratto, Sidanius, Stallworth & Malle; 1994), which is based on Social Dominance Theory (Sidanius et al., 2004) assesses the degree to which individuals differ in preferences for inequality among social groups. SDO is unrelated to interpersonal or task dominance, differentiating it from the desire to personally dominant over others. As an individual difference, SDO is more pertinent to care work due to the negative correlation noted between the general concern for others and a preference for policies and social attitudes that maintain inequality in group relations (Pratto et al., 1994). The care workers interviewed in Chapter 4 (see section 4.3.3 for social conscience and commitment) addressed the influence of commitment towards social equality in their occupational choices, leading to the participation in care work. One would expect care workers to score low on SDO, with a greater preference for social equality. SDO remains stable over time and is invariant across situations and cultures (Sidanius et al., 2000). It is also negatively associated with empathy, tolerance and communality, and females have been found to score significantly lower on SDO than males (Pratto et al., 1994; Sidanius, Pratto & Bobo, 1994). These associations and individual differences relate well to knowledge

about the composition and hypothesised disposition of care workers. Based on this rationale a measure of SDO was sought to measure preference for social equality.

This social equality measure selected was the 14 item version of the SDO (Pratto et al., 1994), a unidimensional scale consisting of 14 statements related to attitudes towards some individuals and groups as inherently inferior or unequal to others. Seven of the 14 statements endorsed equality, providing a balance to the remaining seven items which were orientated towards inequality. The inequality orientated items consisted of statements such as '*Some groups of people are simply not the equals of others'*, whereas the equality orientated items consisted of statements such as *'We should try to treat one another as equals as much as possible'*. The items appeared to have good face validity, focusing on general attributes, as opposed to actual behaviours that could falsely differentiate care workers based on their occupational experiences. The average internal reliability coefficient for SDO has been shown to be satisfactory with a standardised alpha of .83, range .81 to .89 (Pratto et al., 1994; Sidanius et al., 2000). The temporal stability was also respectable, with test-retest estimations of reliability producing a coefficient of .81 in multiple samples (Sidanius et al., 2000). The complete list of items and original response format for the SDO-14 measure can be found in Appendix 7c.

Socially Desirable Responding

Chapter 4 presented the 'challenging perceptions of care work theme', which portrayed the negative misconceptions care workers faced from others regarding their work. Essentially it highlighted care workers' sensitivity towards how they believed they were perceived by others, and concern for the negative attitudes and poor perceptions of care work and care workers held by others. Concerns for being perceived in a socially desirable manner may have motivated care workers to behave and respond in socially desirable ways. Social desirability scales can also be used as adjunct measures to assess for the impact of socially desirable responding on other self-report scales (Reynolds, 1982), although this has been disputed in a meta-analysis and review of the impact of response distortion in personality testing for recruitment purposes (Ones et al, 1996; Dilchert et al, 2006). The primary purpose for the assessment of social desirability in this research was to develop a measure to assess for an association between social desirability and care work.

Social desirability and socially desirable responding in self-report questionnaires has usually been assessed using variations of the Marlowe-Crowne Social Desirability Scale (Crowne and Marlowe, 1960). This particular measure and its abbreviated forms (Stahan & Gerbasi, 1972; Reynolds, 1982; Fraboni & Cooper, 1989) assess for the tendency to respond in a manner that reflects a positive self-description, with item statements referring to actual behaviours and attitudes. However, inspection of the face validity of these items indicated overlap with items on the agreeableness and empathy scales selected for this measure. Previous research has also found a positive association between scores on social desirability scales and empathy scales (Eisenberg & Fabes, 1990; Paulhus & Reid, 1991; Constantine, 2000; Kämpfe, et al; 2009). Overlap on these two constructs suggests that respondents scoring high on empathy may actually behave in socially desirable ways. Alternatively, individuals more sensitive to social appraisals may be more likely to respond in socially desirable ways, even if their responses are not a reflection of actual behaviours (Nunnally, 1978).

Based on this concern for shared variance between empathy and variations of the Marlowe-Crowne Social Desirability Scale, an alternative measure of socially desirable responding was sought which was based only on actual behaviours. For this reason the Lie Scale from the Abbreviated version of the Eysenck Personality Questionnaire Revised (EPQR-A: Francis, Brown & Philipchalk, 1992) was selected. The Lie Scale consisted of a six item unidimensional measure of social desirability, with fixed 'yes' or 'no' responses reported to reflect a personality trait as well as a gauge for response bias (Loos, 1980; Francis, 1991). Items were questions about behaviours such as *'Have you ever cheated at a game?'* and *'Do you always practice what you preach?'* Previous analyses of the standardised alpha coefficients for the Lie Scale have indicated satisfactory internal reliability, ranging from .57 to .76 (Forrest et al, 2000). The complete list of items and original response format for the lie scale social desirability measure can be found in Appendix 7d.

Response Format

The response format for the first 14 demographic and situational items are described above and can be found in Appendix 8. For the pooled 82 dispositional and personality

items taken from the standardised measures of empathy, agreeableness, social dominance orientation and socially desirable responding, the response formats differed and needed to be standardised for amalgamation into one questionnaire with comparable ratings across items.

Similar to the response format for the agreeableness domain of the NEO PI-R (Rust & Lord, 2006), which had the most numerous items included in the construction of this measure, a five-point Likert scale response format was chosen to measure level of agreement with the attitude or behaviour described in the item. Whilst a seven-point scale would have offered greater granularity in responses, according to Goodwin (2009) a five-point scale provides suitable discrimination for assessing agreement. This is especially pertinent when a questionnaire has many items, as a seven-point scale adds time to complete the questionnaire (Goodwin, 2009). The measure in this study consisted of 82 items, and the time taken to complete the questionnaire in one session was an issue, therefore five-points were chosen instead of seven. Participants were asked to respond to the statements by circling the number that best matched how they think or feel about the statement from: 1 '*Strongly Disagree',* 2 *Disagree',* 3 *'Neither Agree or Disagree',* 4 *'Agree' or* 5 *'Strongly Agree'*. A minimum of four ratings options are recommended for reasonable differentiation between ratings points to create a suitable ordinal scale (Rust & Golombok, 1999). Ordinal scales have the advantage of allowing participants to express themselves more accurately than if they were to respond using dichotomous scales (Heim, 1975). It was also considered advisable to use Likert scales with an odd number, giving participants a midpoint to prevent an otherwise non-response for middling views (Alwin & Krosnick, 1991).

The new response format was verified with all the items from each of the scales selected for inclusion in the measure. Agreeableness and the empathy scale items transferred well, adequately maintaining the direction of reverse score items. Social dominance orientation items 3 *'Increased economic equality'*, 4 *'Increased social equality'*, and 7 *'Equality'* had to be modified to statement items of agreement, for example item 3 became *'I would like there to be increased economic equality'*. Reverse score equality items were suitably maintained using the new response format. The socially desirable responding items required the greatest alteration, from questions to statements. For example, '*Have you ever taken advantage of someone?'* became *'I have never taken*

advantage of someone'. With this modification, the single reverse score item in the original lie scale (Francis, Brown & Philipchalk, 1992) changed to a normal score item under the new response format.

Items from the four standardised measures were presented in alternating order with the same instruction given for completion of all 82 items. Once the measure to assess for associations with care work was constructed it was piloted with six people (4 females, 2 males with a mean age of 30) to check for ambiguous items, clear instructions and comprehensive response format. Minor changes were made to the instructions for clarity and reminders were given on each page of the response format for the dispositional and personality items, before it was administered to a large sample. Finalised items, response structures and presentation order for the developed measure to assess for associations with care work questionnaire can be found in Appendix 8.

5.2.2. Participants

Participants were recruited through opportunity sampling of students in London. A sample of students alone was not ideal as this would limit the external validity of the resultant factor structure with potentially little variance in the factors. For this reason, snowball sampling was also used via messages on a social networking site, personal emails, and personal contacts to recruit a large enough sample in order to reduce the probability of errors and to increase the exactitude of population estimates and potential for generalisability. Recommendations have previously been made for a minimum ratio of five respondents for each item included in a principal components analysis, which in this case would be 410, or a minimum N of 400-500 (Osborn & Castello, 2004).

Six hundred and seventeen participants responded to invitations to participate in the research, 127 of whom were undergraduate students. The total sample consisted of 189 males and 427 females, with one participant failing to report their sex. Participants ranged in age from 17 to 67 years old with a mean age of 30 (Std. Deviation 9.57). The majority of participants (62%) were educated to graduate level or above, and were born (79%) and educated (84%) in the UK. In terms of current main Standard Occupational Classification (SOC2000; Office of National Statistics [ONS], 2000): 24% were undergraduate or postgraduate students; 6% were managers or senior officials; 32%

were professionals; 15% were associate professionals and technicians; 9% were administrators; 1% were skilled trade workers; 5% worked in personal service occupations; 4% in sales and customer service; and 1% were in elementary occupations. Three percent of the participants either did not enter their occupation, or insufficient information was given to appropriately classify their occupation.

In terms of ethnic origin, 72% identified themselves as White British, 15% as White Other, 7% as Asian, 2% as Black African or Caribbean, and 4% of mixed ethnic origin. Half of the sample reported being religious, with denominations of Christianity being the most frequently reported religions. The majority of the participants also reported being in a relationship (68%) and did not have any children (80%).

5.2.3. Administration of the Questionnaire

The questionnaire to assess for associations with care work was administered by two methods, on paper or online. The majority of the participants (79%) completed the measure to assess for associations with care work questionnaire via the online version using SurveyMonkey.com (SurveyMonkey.com LCC, 1999). Both versions followed the same presentation order of items (see Appendix 8).

The paper version was presented with an information sheet and a consent form and was given to social and professional contacts of the researcher without personal access to the internet. The information sheet was constructed to inform potential participants about the purpose of the study and what would be involved. The information sheet contained full details about the research question, background to the study, and outlined what participation in the study would involve. In addition, the study recruitment criteria and right to withdraw at any time were also detailed along with the assurance of confidentiality of personal information, and the restricted use of the data. Contact details were also given for further information. The consent form was designed to confirm that participants understood the contents of the information sheet and agreed, in writing, to take part in the study. The form confirmed that consenting to participate was voluntary, and that they could withdraw from the study at any time. The consent form was signed before participants could complete the questionnaire. Contents of the information sheet and consent form are available in Appendices 9 and 10 respectively.

After completing the questionnaire, participants posted or returned the questionnaire to the researcher in person.

The same information conveyed in the information sheet was also given on the first screen of the online version, with the additional assurance that responses would be transmitted through secure encrypted URLs, using Secure Socket Layer (SSL) technology. Participants needed to click 'yes' to a consent question before they could proceed with the online version of the questionnaire. The URL for the questionnaire was sent in personal emails and posted on the researcher's social networking site. Completed responses were downloaded onto an Excel spreadsheet and were recorded by Internet Protocol (IP) address, to ensure responses were from the UK. No other identifiable information was asked for or retained.

Ethical approval for the study was granted by the University of East London Ethics Committee (see Appendix 11 for confirmation).

5.2.4. Analysis and Scale Refinement

After data were collected, analyses were required to establish the psychometric properties of the items and trends within the dataset. Scale evaluation and development procedures contribute to the refinement of a measure. This can be a prolonged and continual process (Nunnally, 1978). However, in this research, scale refinement was focused on establishing patterns of shared variance between items on the questionnaire, to reduce the 82 items to a smaller number of factors with underlying dimensionality suitable for the purposes of establishing individual differences. The scales included are likely to be correlated (see section 5.2.1 under dispositional and personality items for potential associations) and the number of items needs to be reduced. A conjoint factor analytic route can reduce items and produce more orthogonal scales to rectify both.

Analysis and scale refinement occurred in stages:

- After the data were checked and missing data were dealt with, the first stage was a logical analysis to assess for issues arising in the administering of the questionnaire that could compromise internal validity prior to the statistical

analyses. A logical analysis was particularly constructive for evaluating both the use of the situational and demographic items with a larger sample and using an online format for administering the questionnaire, which had been piloted using the paper format.

- The second stage was the use of exploratory factor analytic techniques as an internal structure analysis to summarise the patterns of shared variance between items on the questionnaire. In order to reduce the 82 items to a smaller number of subscales with underlying dimensionality, Principal Components Analysis (PCA) was used to identify clusters amongst the personality and dispositional items to reduce items to a manageable set of subscales assessing different personality dimensions. PCA allowed for the removal of items that loaded on more than one factor, and/or displayed low loadings on any of the factors. PCA was chosen for its suitability for data reduction in exploratory research with no specific prior assumptions about which items would be associated with which factors (Tabachnick & Fidell, 2007). Although pooled items came from pre-existing scales, and this could be used as the basis for predications about the relationship between items and factors, pooling of these items across different scales may result in a different factor structure. It is important to acknowledge here that PCA is methodologically different from other factor analytic techniques. The term *'factors'* was used in this research instead of *'principal components'* for ease of exposition. Although both PCA and factor analytic techniques can produce similar solutions under certain parameters (Stevens, 2002), they are theoretically different methods of analysis. Factor analytic techniques are generally considered suitable for capturing constituents in the 'real world', while PCA consists of components that do not always map well to occurrences in the real world, limiting inference to the causal relationships between variables and underlying constructs. This is because PCA accounts for all of the observed variance in the analysis - both unique and common, whereas common factor analytic techniques analyse based on the differentiation of common variance from unique variance, with the assumption that variables imperfectly measure the underlying factor (Fabrigar et al., 1999). PCA was chosen in this study instead of other factor analytic techniques as it is statistically more inclusive because it uses all of the observed variance in

producing orthogonal factors, and therefore provides a clearer factor structure for assessing item reduction.

- During the final stage, the internal reliability of the resultant factors was evaluated to refine the subscales and improve the homogeneity within the factors, whilst ensuring the removal of items that were overly similar in content and thus would limit the variance in the subscale. The descriptive statistics for the final subscales were presented, as well as relationships between subscales and two key demographic factors: sex and age.

5.3. Findings

5.3.1. Logical Analysis

In scale development research Cronbach (1971) recommended preceding any statistical assessment of internal reliability and validity with a logical analysis of the item content and method of administration, addressing any issues arising that had the potential to invalidate the measure. A logical analysis was also conducted to evaluate the validity of situational and demographic questions, and the use of an online method for administrating the questionnaire.

Demographic and Situational Items

Participants generally responded well to the situational and demographic items using both the on paper and online formats of the questionnaire. Some participants did however report difficulty with answering a particular aspect of the final demographic and situational question (Q.14), regarding care responsibilities and commitment to others outside of paid care work. The question '*how frequently do/did you provide this support/care for?'* was answered in terms of frequency, which was difficult for those providing infrequent care to answer. Frequency captured the intensity of care commitments which could be an isolated event, such as every day for a week, whereas a duration-phrased question would have captured the extent of care commitments over time, such as a few hours a week for a year. The latter allows for more straightforward

comparisons of prolonged versus short periods of care for others. Comparisons based on frequency had the potential to avoid the assessment of prolonged care commitments, which was the purpose of Q.14. It was therefore considered appropriate to change the wording of the question to '*how long have/did you provide this support/care for?'* in subsequent questionnaires to avoid the complexities of frequency and to focus on duration instead. A related section regarding the nature of care within Q.14 provided some indication of intensity, for example providing domestic support only such as helping with housework, versus providing domestic support and personal care such as assistance with eating, bathing, etc. Providing care in multiple domains, as entailed in the latter, is likely to be more intense in terms of time dedicated to additional daily tasks.

Dispositional and Personality Items

The item content of the dispositional and personality items was constructed based on the literature review in Chapter 2, qualitative findings in Chapter 4 and items from established measures. No issues were raised by the participants on specific items with regards to ambiguity and clarity. Any items deemed unreliable and invalid were appropriately identified in the statistical analyses and removed from subsequent versions of the questionnaires.

One problem identified in this section of the questionnaire was that some participants did not complete all 82 items. This was attributed to the large quantity of items which made this section particularly long to complete. This exposed completion of the questionnaire to inducing boredom effects and acquiescence in response to items. The reverse score items and scanning of the dataset indicated no major concern for acquiescence, only greater non-response towards the end of the questionnaire. Feedback from participants recommended this section should be half the current length, with additional reminders on the online version of the response format as you scroll down the page, akin to those on the paper version of the questionnaire at the top of each page. Both of these aspects were addressed and modified in subsequent questionnaires.

5.3.2. Internal Structure Analysis: Principal Components Analysis

The logical analysis indicated the necessity to reduce the number of dispositional and personality items. Principal Components Analysis (PCA) was used to identify the items with the highest correlations to the principal components (factors) to reduce the number of items. PCA also allows for the internal structure of the items to be identified as unidimensional subscales relatively independent of each other. This was necessary to clarify the relationship between items and underlying factors, and to also prevent multicollinearity in subsequent analyses using the refined subscales (Tabachnick & Fidell, 2007).

According to Field (2009), PCA is psychometrically sound and suitable for identifying the linear factors that exist in a dataset, as well as how items relate to these factors by assessing the unique and common variance of items. For this reason PCA was used as the extraction method to construct subscales based on the resultant factor structure produced by the analysis. The formulation of meaningful subscales is a precondition for computing internal consistency and reliability (Cortina, 1993).

In preparation for the PCA, the data were checked and where responses were missing for over 20% of items from all of the original measures (i.e. from the two empathy measures, the six agreeableness subscales, SDO, and socially desirable responding measures) within a given case, these were excluded from this analysis. Cases with less than or equal to 20% of responses missing from any of the original measures were included in the analysis, with missing values replaced with the case mean of actual responses from the remaining items in the particular measure. Case mean substitution was chosen over list mean substitution, as the latter can underestimated variance to a greater extent than the former. Both forms of substitution reduced the variance explained by the initial eigenvalues slightly (less than 0.5%), but case mean substitution did this to a lesser extent. Cohen and colleagues (2003) have also suggested that mean substitution makes only an inconsequential change to correlation coefficients when approximately 10% of cases are substituted with the mean. In this study a smaller percentage than this was substituted with the case mean, approximately 5% of valid cases (27 cases), therefore any changes to the resulting factor structure as a consequence of mean substitution are unlikely to differ vastly from what have resulted otherwise.

Ninety two cases were excluded from this and subsequent analyses, resulting in a valid N=525, which was a sufficient sample for PCA with 82 items (Osborn & Costello, 2004). These cases were removed as 86 did not complete any of the 82 items, but completed only the demographic and situational items. The remaining six excluded cases completed less than 40% of the 82 items. It is suspected that the length of the questionnaire may have resulted in the incomplete responses for these 92 cases. Preliminary analysis for PCA confirmed exceptional sampling adequacy using the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = .91).

In order to determine the number of factors extracted for rotation, several methods were explored to avoid over and under extraction of factors (Costello & Osborn, 2005). The widely used Kaiser-Guttman criterion (Guttman, 1953; Kaiser 1960) of retaining factors with eigenvalues greater than one was based on the arbitrary assumption that eigenvalues greater than one account for a better than average explanation of variance and are therefore more meaningful. However, this criterion has the tendency to overestimate the number of factors for extraction and has been linked to properties of the dataset, such as number of items (Field, 2009). For this dataset, adopting the Kaiser-Guttman criterion would have resulted in the extraction of 19 factors with a meaningless factor structure and 10 factors explaining less than two percent of the variance each. See Table 5.1 for eigenvalues and percent of variance explained for the first 20 factors.

Cattell's scree plot (1966) is regarded by some as a better technique for extracting factors (Costello & Osborn, 2005). This method is based on inspecting a plot of the number of factors by eigenvalues and looking for the point of inflexion on the curve, in other words where the data points appear to flatten out on the plot. Factors before the point of inflexion are retained as they are regarded as being more meaningful. This approach is rather subjective, which was particularly problematic for this dataset, where the data points on the scree plot were too close together to establish a clear point of inflexion.

Table 5.1. Eigenvalues and percent of variance explained for the first 20 factors prior to extraction

Number of Factors	Eigenvalue	% of Variance
1	14.832	18.088
2	4.134	5.042
3	3.665	4.470
4	3.323	4.053
5	2.535	3.092
6	2.124	2.591
7	1.973	2.406
8	1.761	2.147
9	1.695	2.067
10	1.596	1.946
11	1.342	1.636
12	1.337	1.630
13	1.248	1.522
14	1.186	1.447
15	1.121	1.367
16	1.104	1.346
17	1.083	1.321
18	1.056	1.288
19	1.039	1.267
20	.971	1.185

For a more accurate and meaningful factor structure an alternative method for determining the number of factors extracted was sought. Horn's Parallel Analysis (PA: Horn, 1965) compares eigenvalues produced from the actual dataset with those generated from many random data sets with the same properties as the actual dataset. This method was akin to null hypothesis testing. Comparison of actual eigenvalues against random eigenvalues with no underlying factors provided the basic rule that actual eigenvalues higher than those produced less than 5% of the time by chance should be retained, and those below this threshold should be dropped (Wilson & Cooper, 2008). Horn's PA has been generally regarded as a less arbitrary approach (Zwick & Velicer, 1986) and was calculated using the factor analysis program FACTOR (Lorenzo-Seva & Ferrando, 2006), which compares actual eigenvalues with 500 randomly generated eigenvalues. Nine factors were recommended for retention based on this analysis, which also made sense at a conceptual level. For a comparison

of eigenvalues greater than one, from the actual dataset and randomly generated eigenvalues, see Appendix 12a for the Horn's PA output.

After nine factors were extracted, they were obliquely rotated using direct oblimin for a clear and interpretable factor structure. Oblique rotation was selected over orthogonal rotation as there was reason to suspect correlations among factors (see Appendix 12b). Items within factors originated from the same measures, and associations were noted between the constructs underlying the original measures during scale development. One would also expect some degree of interrelations between factors that were all theorised to be predictive of care work. Interrelations between factors are examined later as factor correlations.

Factor Structure

The nine factors were extracted and rotated using SPSS version 18. Item loadings on factors ≥ .40 were judged as important estimates of variance (Stevens, 2002), and were interpreted in the factor structure. On examination of the pattern matrix, Factor 1 had an eigenvalue of 3.74 and five items with factor loadings ≥ .40. Factor 1 was named 'Inequality between People' because it was constituted mainly of items from the SDO measure which focused on beliefs about inequality between people, with the exception of the item with the lowest loading which was concerned with feeling pity for someone being treated unfairly (item 71). This item was originally from the emotional concern empathy measure. It was the only item of the five that was positively loaded to the factor and conceptually fitted with items from Factor 9 more appropriately, where it held a reasonable factor loading of .30. For these reasons it was dropped, consequently leaving four items which made up the subscale.

Factor 2 had an eigenvalue of 4.92 and seven items with factor loadings clearly above the threshold, with .54 being the lowest loading. This factor was named 'Socially Desirable Responding' as it constituted all of the six items from the socially desirable responding measure (EPQR-A), with the exception of one item with the second to lowest factor loading which was from the agreeableness straightforwardness (A2) measure *'I couldn't deceive anyone even if I wanted to'* (item 22). All seven items clearly defined socially desirable behaviours, but needed to be reduced for use as a short

subscale. Consequently the two items with the lowest factor loadings were removed, leaving five items originating from the same measure.

Factor 3 had an eigenvalue of 6.63 with nine items with factor loadings ranging from the threshold .40 to .74. This factor was entitled 'Trust in Human Nature' as it included all eight items from the agreeableness trust (A1) measure and one item from the agreeableness compliance (A4) measure *'When I have been insulted I just try to forgive and forget'* (item 48), which had the lowest loading of the nine items. The remaining eight items related to beliefs about trust in human nature and the intentions of others, whereas item 48 concerned forgiveness which was conceptually different from the other items. To reduce the number of items for use as a subscale, item 48 and two other items with loadings ≤ .60 were excluded. In addition, item 59 *'I tend to assume the best about people'* was very similar in content to item 41 *'My first reaction is to trust people'*, and item 60 *'I have a good deal of faith in human nature'*. The latter two items had higher loadings to Factor 3. On inspection of inter-item correlations, item 59 and item 41 were also highly correlated (.62), more so than any of the other inter-item correlations for Factor 3, suggesting conceptual overlap. Item 59 appeared to add nothing new to the subscale for Factor 3, in terms of capturing variance and removed accordingly. This left five items representing attitudes and behaviours the corresponded with Trust in Human Nature.

Factor 4 held an eigenvalue of 3.90 and had five items with factor loadings above the minimum threshold of ≥ .40. Four items included in this factor came from the agreeableness compliance (A4) measure and the remaining item came from the agreeableness tender-mindedness (A6) measure. This factor was designated the title 'Hardheadedness' because all of the items centred on aspects of hard-headedness and stubbornness, or the reverse of compliance in the case of item 29 *'I hesitate to express my anger even when it's justified.'* The highest factor loading items on Factor 4 were inspected for similarity in content. Item 68 '*I'm hard-headed and stubborn'* (from A4) and item 17 *'I'm hard-headed and tough-minded in my attitudes'* (from A6) held the highest inter-item correlation among items for Factor 4 (.51). Both encapsulated inflexibility in the use of the term *hard-headed*, however they differed on the second part of the item. The '*stubborn'* reference in item 68 seemed more behavioural and related to obstinacy, whereas the '*tough-headed in my attitudes'* reference in item 17

seemed based more on being firm in one's attitudes and opinions. Both of these items were considered sufficiently different on a conceptual level, and were retained to form the five item subscale.

Factor 5 obtained an eigenvalue of 5.39 with four items evidently above the minimum threshold loading of .40. This factor was labelled 'Manipulative' because all of the items concerned manipulating others for personal gain, both overtly and covertly. It consisted of two items from the agreeableness straightforwardness (A2) measure and two items from the agreeableness altruism (A3) measure. The two items from the A2 measure appeared similar in content and shared an inter-item correlation of .52. Consequently item 43 *'Sometimes I trick people into doing what I want'* and item 61 *'At times I bully or flatter people into doing what I want them to'* were examined for conceptual similarity. These items were regarded as capturing different methods of manipulation. Item 43 focused on more concealed methods of manipulating others by tricking them, whereas item 61 centred on more blatant methods of manipulating others such as bullying and flattery. For this reason, both items were retained to form a four item subscale.

Factor 6 attained an eigenvalue of 6.36 and six items with factor loadings ≥ .40, the loading threshold. This factor was entitled 'Cognitive Empathy – Perspective Taking' because the six items were derived from the same empathy perspective-taking (PT) measure, which assessed the view points of others. All six items evidently assessed the desire and ability to take the perspective of another, but needed to be reduced for use as a short subscale. Consequently the item with the lowest factor loading (.42) was removed, leaving five items from the same measure.

Factor 7 had an eigenvalue of 5.71 and seven items with factor loadings above the minimum threshold. This factor was pertinently labelled 'Modesty' as all the items were from the agreeableness modesty (A5) measure and assessed self-effacing tendencies. Again, all items evidently assessed personal diffidence and humility entailed in modesty, however the number of items needed to be reduced to form a short subscale. On examination of the items, item 73 *'I am a superior person'* appeared to be too conceptually similar to item 33 *'I am better than most people and I know it'*, and inspection of the inter-item correlation confirmed the highest correlation between those

two items over any of the others in Factor 7. Both items indicated a knowing superiority over others and for this reason item 73, which had the lower factor loading of the two items, was removed. The item with the lowest factor loading (.47) was also removed (item 54), resulting in a five item subscale for Factor 7.

Factor 8 held an eigenvalue of 8.87 and ten items with factor loadings ≥ .40. Factor 8 was entitled 'Societal and Economic Equality' because it constituted mainly of items from the SDO measure which focused on beliefs about equality between people at a societal and economic level, with the exception of item 55 *'Human need should also take priority over economic considerations'* which came from the agreeableness tender-mindedness (A6) measure, but also pertained to wider social equality. To reduce the number of items from ten to a subscale of five items, items with high inter-item correlations were inspected for potential conceptual overlap. Item 24 *'I would like there to be increased social equality'* had the highest loading on Factor 8 and correlated highly with item 18 (.64) and item 44 (.60). These items were phrased very similarly to item 24, barring the last part of the item that referred to *increased economic equality* for item 18 and just *equality* for item 44 instead. Items 18 and 44 lacked distinction in terms of phrasing and/or conceptual content from item 24 and were removed accordingly. Item 80 *'It is important that we treat other countries as equals'* was similarly highly correlated with item 70 (.64) and item 74 (.55). Item 70 *'In an ideal world, all nations would be equal'* had clear conceptual overlap with item 80. Both concerned opinions about equality at an international level, and for this reason item 70 was removed. Item 74 '*We should try to treat one another as equals as much as possible'* did not appear conceptually similar to item 80, but the phrasing was similar in terms of treating either individuals or countries as *equals*. Item 74 also did not fit the majority of items loaded on to Factor 8 in terms of equality at the social or economic level. It was therefore removed together with item 57, which also focused on equality between individuals as opposed to wider social or economic level equality. The remaining five items from Factor 8 formed the subscale.

Factor 9 obtained an eigenvalue of 5.43 and six items with factor loadings ≥ .40. This factor was named 'Emotional Empathy – Concern for Others' as the items in this factor constituted of two items from the empathy emotional concern (EC) measure, two items from the agreeableness altruism (A3) measure, and two items from the agreeableness

tender-mindedness (A6) measure. The five items with the highest factor loadings to Factor 9 were conceptually analogous in terms of feeling empathic concern for others and responding accordingly. The sixth item *'I would rather be known as "merciful" than as "just"'* (item 78) differed from the other items in pitting compassion against fairness. The moral dimension to this item made it conceptually different from the other items, and as a consequence it was excluded to form a five item subscale.

To assess for relationships between factors, correlation coefficients were examined and revealed small to moderate factor interrelations. The highest correlation coefficients (.26) were between: Factors 6 and 8; Factors 7 and 8; and Factors 8 and 9. Factor 8 referred to an ideological preference for social and economic equality. On examination of the structure matrix, item 74 positively correlated with Factor 6 which referred to cognitive empathy and perspective taking, it also negatively correlated with Factor 9, concerned with emotional empathy and feeling concern for others, which was unexpected. This further validated the removal of this item from the subscale for Factor 8, as it failed to load distinctly onto Factor 8. Item 63, which did not load onto Factor 9 when considering the unique substantive importance of items, negatively correlated with Factor 7 which conceptually focused on modesty. It also loaded most substantively onto Factor 1, inequality between people, where it was loaded on in the pattern matrix and made the most theoretical sense. For the entire PCA factor correlation coefficient matrix see Appendix 12b.

The PCA pattern structure indicated the unique substantive importance of item loadings onto factors as detailed above. The rotated factor loadings from the data on the developed questionnaire items are listed below in Table 5.2. Figures in **bold** refer to the items loading onto each of the nine factors, including those below the minimum factor loading threshold ≥ .40. Figures **<u>underlined</u>** indicated the items selected for inclusion in the constitute factor subscales. Items were selected for being conceptually meaningful of the underlying factor and distinct in content. Assessing conceptual clarity and ensuring items consistently loaded onto one factor, allowed for the formation of valid subscales measuring the same attitudes and behaviours with good internal construct validity. PCA enabled the reduction of items to form preliminary subscales to measure: Inequality between People; Socially Desirable Responding; Trust in Human Nature;

Hardheadedness; Manipulative; Cognitive Empathy – Perspective Taking; Modesty; Societal and Economic Equality; and Emotional Empathy – Concern for Others.

Table 5.2. Rotated factor matrix for the developed questionnaire items

Question item number & content (originating measure)	Factors								
	1	2	3	4	5	6	7	8	9
Q37 Some people are just more deserving than others (SDO)	**-.472**	.012	-.052	-.066	-.037	.024	-.206	.341	.049
Q11 Some people are just more worthy than others (SDO)	**-.465**	.012	-.180	-.040	-.086	-.005	-.297	.128	.012
Q5 Some groups of people are simply not the equals of others (SDO)	**-.439**	-.096	-.145	.020	-.104	-.005	-.182	.324	.193
Q63 Some people are just inferior to others (SDO)	**-.405**	.063	-.156	-.064	-.107	.117	-.315	.295	-.004
Q71 When I see someone being treated unfairly, I sometimes don't feel very much pity for them (EC)	**.404**	.105	-.014	-.015	.185	-.287	.037	-.102	.297
Q45 When I see someone being taken advantage of, I feel protective towards them (EC)	**.388**	.088	-.085	-.055	.048	-.133	-.108	-.123	.237
Q34 I try to be humble (A5)	**-.238**	.102	.047	.076	.139	-.168	.181	-.105	.162
Q76 I have never taken anything (even a pin or button) that belonged to someone else (EPQ-R)	.072	**.693**	-.043	-.005	-.073	.117	-.019	.081	.099
Q26 I have never cheated at a game (EPQ-R)	.074	**.641**	-.081	-.093	-.112	-.061	-.111	-.007	-.006
Q13 I have never taken advantage of someone (EPQ-R)	-.033	**.618**	-.100	-.024	.252	.041	.048	-.004	-.023
Q65 I have never blamed someone for doing something I knew was really my fault (EPQ-R)	.054	**.591**	.027	.027	-.162	-.139	.014	.034	-.102
Q52 I was never greedy by helping myself to more than my share of anything (EPQ-R)	-.095	**.570**	.005	.093	.088	-.007	.015	.032	.087
Q22 I couldn't deceive anyone even if I wanted to (A2)	-.079	**.566**	.005	-.076	.161	.065	.096	-.005	.058
Q39 I always practice what I preach (EPQ-R)	-.092	**.541**	.065	.167	-.007	-.102	-.200	-.090	.014
Q79 To get ahead in life, it is sometimes necessary to step on others (SDO)	-.208	**-.313**	-.126	.114	-.088	.106	-.140	.171	.045
Q60 I have a good deal of faith in human nature (A1)	-.089	.036	**.742**	.072	-.060	-.021	-.009	.030	.150
Q41 My first reaction is to trust people (A1)	-.117	-.078	**.697**	.007	.114	.022	-.035	-.029	.060
Q59 I tend to assume the best about people (A1)	-.112	.072	**.689**	.065	.143	-.073	.030	.026	.103
Q1 I tend to be cynical and sceptical of others' intentions (A1)	.075	.072	**.661**	-.064	.073	.042	-.021	.072	.051
Q2 I believe that most people are basically well-intentioned (A1)	-.005	-.094	**.653**	-.103	-.095	-.082	-.028	.016	.034
Q21 I think most of the people I deal with are honest and trustworthy (A1)	.055	-.020	**.636**	-.006	-.024	-.020	-.011	-.022	-.047
Q20 I believe that most people will take advantage of you if you let them (A1)	.241	-.087	**.541**	-.177	-.107	.037	-.034	-.097	-.060
Q40 I'm suspicious when someone does something nice for me (A1)	.230	-.019	**.491**	-.142	.070	.021	-.236	.008	.063

Q48 When I've been insulted, I just try to forgive and forget (A4)	-.193	.085	**.401**	-.143	.017	-.110	.136	.016	-.099
Q56 I believe all human beings are worthy of respect (A6)	.249	.051	**.269**	.101	-.043	-.069	.191	-.258	-.008
Q23 Being perfectly honest is a bad way to do business (A2)	.066	.197	**.232**	-.072	-.038	.002	.140	-.185	-.071
Q68 I'm hard-headed and stubborn (A4) REVERSE	-.071	.058	.139	**-.619**	.055	.055	.058	-.013	.058
Q17 I'm hard-headed and tough-minded in my attitudes (A6)	.081	-.088	.119	**-.615**	.101	.150	.087	.037	.064
Q30 If I don't like people, I let them know it (A4)	.058	-.027	.034	**-.572**	.065	-.121	-.030	.025	.027
Q29 I hesitate to express my anger even when it's justified (A4)	.286	.001	.111	**.522**	.045	.203	.016	.146	.003
Q49 If someone starts a fight, I'm ready to fight back (A4)	.025	.111	.137	**-.483**	-.023	-.100	.073	-.054	-.105
Q69 I often get into arguments with my family and co-workers (A4)	.017	-.002	.190	**-.383**	.236	-.114	-.032	.030	-.072
Q10 I can be sarcastic and cutting when I need to be (A4)	.065	.341	.146	**-.375**	-.030	.011	.063	.143	.160
Q27 Some people think of me as cold and calculating (A3)	.056	-.087	.160	-.178	**.524**	.002	-.034	-.049	.209
Q43 Sometimes I trick people into doing what I want (A2)	.072	.205	.012	-.133	**.522**	.034	.180	-.171	-.125
Q7 Some people think I'm selfish and egotistical (A3)	.097	.003	.035	-.086	**.474**	.033	.084	.019	.188
Q61 At times I bully or flatter people into doing what I want them to (A2)	.059	.298	-.139	-.166	**.432**	-.015	.282	-.043	-.132
Q4 If necessary, I am willing to manipulate people to get what I want (A2)	.072	.365	.121	-.094	**.396**	.089	.198	-.017	-.095
Q3 I'm not crafty or sly (A2)	.028	.285	.125	-.060	**.377**	.101	.023	-.141	-.019
Q47 Most people I know like me (A3)	-.109	-.073	.262	.122	**.368**	-.169	-.285	-.045	.024
Q46 I'm not known for my generosity (A3)	.172	.041	.036	.187	**.348**	-.196	-.127	.038	.266
Q9 I would rather cooperate with others than compete with them (A4)	-.222	.052	.116	-.175	**.324**	-.225	.030	-.230	-.092
Q62 I pride myself on my shrewdness in handling people (A2)	.063	-.035	-.126	-.220	**.320**	-.013	.272	-.074	-.103
Q12 I try to look at everybody's side of a disagreement before I make a decision (PT)	-.038	.068	.075	.066	.097	**-.651**	.068	-.002	-.155
Q58 I believe that there are two sides to every question and try to look at them both (PT)	-.033	-.016	.052	.050	.051	**-.636**	.098	-.028	-.041
Q64 When I'm upset at someone, I usually try to "put myself in their shoes" for a while (PT)	.014	.038	.102	-.145	-.218	**-.625**	.046	-.054	.051
Q81 Before criticizing somebody, I try to imagine how I would feel if I were in their place (PT)	.020	.155	.052	-.125	-.197	**-.607**	.066	.006	.059
Q32 I sometimes try to understand my friends better by imagining how things look from their perspective (PT)	.008	-.069	.052	-.009	-.083	**-.586**	.088	-.097	.119
Q6 I sometimes find it difficult to see things from the "other person's" point of view (IRI PT 1) REVERSE	.164	-.011	-.123	-.158	.121	**-.419**	-.082	.075	.095
Q28 I generally try to be thoughtful and considerate (A3)	-.168	-.058	-.022	.026	.355	**-.361**	.064	-.168	.233

Q38 If I'm sure I'm right about something, I don't waste much time listening to other people's arguments (PR)	.024	-.027	.127	-.193	.282	**-.315**	.179	.069	-.078
Q8 I try to be courteous to everyone I meet (A3)	-.244	.049	.096	.045	.303	**-.303**	.036	-.111	.165
Q42 I would hate to be thought of as a hypocrite (A2)	-.069	.144	.056	.045	.103	**-.198**	.015	-.182	.169
Q53 I have a very high opinion of myself (A5)	.047	-.128	-.166	-.123	.128	.030	**.704**	.190	.117
Q33 I'm better than most people, and I know it (A5)	.199	-.114	.071	.079	.108	.033	**.668**	-.009	.100
Q73 I'm a superior person (A5)	.304	-.093	.084	.075	.148	-.123	**.575**	-.063	.031
Q14 I don't mind bragging about my talents and accomplishments (A5)	-.050	.040	-.057	-.132	.003	-.138	**.568**	-.058	-.052
Q15 I'd rather not talk about myself and my achievements (A5)	-.226	.036	-.054	-.134	-.097	-.128	**.537**	-.049	-.004
Q72 I would rather praise others than be praised myself (A5)	-.148	.168	.034	.013	-.093	-.148	**.489**	.007	.123
Q54 I feel that I am no better than others, no matter what their condition (A5)	.203	.090	.085	.136	-.033	-.039	**.473**	-.093	.010
Q24 I would like there to be increased social equality (SDO)	.044	.029	.008	.063	-.101	-.035	.087	**.809**	.010
Q18 I would like there to be increased economic equality (SDO)	.061	.104	-.036	.030	.063	-.020	.109	**.800**	.001
Q44 I would like there to be equality (SDO)	-.014	.063	.033	.040	-.212	-.026	.025	**.760**	.027
Q50 If people were treated more equally we would have fewer problems in this country (SDO)	-.004	-.159	.099	-.008	.064	-.067	.064	**.688**	-.120
Q80 It is important that we treat other countries as equals (SDO)	-.086	-.060	-.134	.007	.115	.096	-.020	**.624**	.001
Q70 In an ideal world, all nations would be equal (SDO)	-.101	-.011	-.067	-.093	.060	.090	-.083	**.590**	-.007
Q31 This country would be better off if we cared less about how equal all people were (SDO)	-.191	.094	-.013	.087	-.138	.002	-.022	**.579**	-.023
Q74 We should try to treat one another as equals as much as possible (SDO)	-.123	-.028	-.081	-.061	.029	.255	-.048	**.538**	-.081
Q55 Human need should always take priority over economic considerations (A6)	-.116	.091	-.008	.070	.005	.111	.166	**-.499**	.178
Q57 It is not a problem if some people have more of a chance in life than others (SDO)	-.316	.088	.123	.219	.075	.092	.063	**.447**	-.107
Q16 Political leaders need to be more aware of the human side of their policies (A6)	-.168	-.035	-.076	.214	.067	-.156	.175	**-.373**	.085
Q19 I often have tender, concerned feelings for people less fortunate than me (EC)	-.015	-.011	-.011	.037	.085	-.133	.046	-.172	**.566**
Q75 I am often quite touched by things that I see happen (EC)	.063	-.007	.185	.078	-.062	-.161	.047	-.075	**.510**
Q67 I go out of my way to help others if I can (A3)	.066	.056	-.008	.205	.136	-.337	.010	.088	**.497**
Q77 I have sympathy for others less fortunate than me (A6)	.075	.060	.093	-.136	-.116	.002	-.019	-.204	**.453**
Q66 I think of myself as a charitable person (A3)	.022	.130	.145	.220	.185	-.003	-.038	-.024	**.453**
Q78 I would rather be known as "merciful" than as "just" (A6)	-.196	.003	.046	-.155	-.099	.212	.160	-.040	**.430**
Q82 I would describe myself as a pretty soft-hearted person (EC)	-.183	.108	.115	-.171	.242	-.112	-.034	-.022	**.399**

Q35 We can never do too much for the poor and elderly (A6)	-.045	.068	.182	.125	-.031	.083	.174	-.218	**.391**
Q51 Other people's misfortunes do not usually disturb me a great deal (EC)	.337	.040	-.035	-.209	.079	-.068	.015	-.115	**.383**
Q36 I have no sympathy for beggars (A6)	.229	-.130	.050	-.209	-.029	-.073	.047	-.255	**.376**
Q25 Sometimes I don't feel very sorry for other people when they are having problems (EC)	.257	.169	-.015	-.097	.198	-.133	.126	.041	**.373**

5.3.3. Internal Reliability

The preliminary subscales derived from the PCA were established as having good dimensional construct validity. A further psychometric requirement was to establish the internal consistency of the items in reflecting the construct being measured. The item content of each subscale should be relatively homogeneous, to ensure the subscale is a reliable measure of the construct (Nunnally, 1978).

Initially the reliability of the subscales was assessed using item-total correlations and surveying whether items were sufficiently discriminating within a given subscale, although this was predominately inspected during the refinement of factors during the PCA, and therefore should be of limited concern here. Field (2009) recommended removing items that do not correlate well with the overall scale, and so item-total correlation coefficients $\leq .30$ were considered problematic for maintaining internal reliability. After the removal of any problematic items[3], Cronbach's alpha (Cronbach, 1971) coefficients were calculated to give an indication of the reliability of the subscales. Generally any alpha coefficient $\geq .70$ has been regarded as a good indication of reliability, although caution has been raised in the use of stringent cut offs for alpha, which can be influenced by systematic error, lack of unidimensionality, and number of items (Cortina, 1993; Schmitt, 1996; Shevlin et al., 2000; Baguley, 2008). The PCA enabled dimensionality to be ascertained for the subscales, and the number of items have been limited to four or five per subscale which should abate influences other than estimates of reliability to some degree. Nonetheless, coefficient alpha remains a reasonable estimate of reliability (Cortina, 1993).

[3] Five items with reasonably high factor loadings needed to be removed for having high inter-item correlations (items 18, 44, 59, 70 and 74).

PASW version 18 was used to calculate the item-total analysis and alpha coefficients for each of the nine subscales independently. The item analyses demonstrated good internal consistency, with corrected item-total correlations ranging from .34 to .65 across the subscales. The alpha coefficients are summarised in Table 5.3 below and held good internal consistency, ranging from .66 to .80. Three of the subscales were below the .70 recommended cut off, but they were not excessively below this point and maintained good item-total correlations indicating adequate reliability. Full item-total correlation results and alpha coefficients for subscales if items were removed are located in Appendix 12c.

Table 5.3. Cronbach's alpha coefficients for the nine subscales

Subscale	Number of items	Alpha coefficient
Inequality between People	4	.800
Socially Desirable Responding	5	.690
Trust in Human Nature	5	.768
Hardheadedness	5	.660
Manipulative	4	.679
Cognitive Empathy – Perspective Taking	5	.753
Modesty	5	.708
Societal and Economic Equality	5	.756
Emotional Empathy – Concern for Others	5	.715

5.3.4. Descriptive Statistics for Subscales

The nine subscales appeared to exhibit acceptable validity and reliability. Descriptive statistics of the subscales were also inspected to establish an indication of sample average scores, and the dispersion of scores within a sample. An indication of central tendency was required for future comparisons to be made across samples, whereas an indicator of dispersion was required to assess for whether variation between individuals was being measured by the subscales. Table 5.4 lists means and standard deviations of respondents' total score (n=525) on each of the nine subscales.

Table 5.4. Means (standard deviations) for respondents' total score on the nine subscales

Subscale	Total Score (std. deviations)
Inequality between People	8.83 (3.46)
Socially Desirable Responding	13.59 (3.38)
Trust in Human Nature	17.83 (3.17)
Hardheadedness	15.54 (2.66)
Manipulative	15.50 (2.55)
Cognitive Empathy – Perspective Taking	18.78 (2.76)
Modesty	17.71 (3.13)
Societal and Economic Equality	12.08 (2.43)
Emotional Empathy – Concern for Others	19.20 (2.57)

The underlying dispositional traits assessed by the subscale items were reported with some agreement using the nine self-report subscales. The two empathy subscales appeared to be the ones where most agreement was given in response to the items on average. The standard deviations for all nine subscales showed some variation in sample responses to subscale items, indicating suitability for the assessment of individual differences.

5.3.5. Subscales and Key Demographic Factors

Items within the subscales originated from measures where small sex and age differences were noted in the literature (Sidanius et al., 1994; Costa et al., 2001). In order to establish the degree of sex differences on the nine subscales, males and females scores were compared and analysed using t-tests. Examination of the means depicted a tendency for males to score higher on Inequality between People and Societal and Economic Equality, whereas females appeared to score higher on the remaining eight measures. Levene's test for equality of variances indicted homogeneity of variance for males and females on seven of the nine subscales and unequal variance for two of the subscales, Inequality between People and Cognitive Empathy – Perspective Taking. Where the variances were unequal between males and females, separate variance estimates were used to calculate the t-test statistic instead of pooled variance estimates.

Table 5.5 reports the t-test statistics across the nine subscales for differences between males (n=162) and females (n=363).

Table 5.5. *t* statistic for sex differences across the nine subscales

Subscale	*t* statistic
Inequality between People	4.47†
Socially Desirable Responding	-3.92†
Trust in Human Nature	-1.74
Hardheadedness	-3.45†
Manipulative	-5.06†
Cognitive Empathy – Perspective Taking	-2.24†
Modesty	-3.52†
Societal and Economic Equality	.69
Emotional Empathy – Concern for Others	-3.63†

† Statistically significant difference in the means at the .05 level.

Statistically significant differences between males and females scores were noted for: Inequality between People ($p < .001$), Socially Desirable Responding ($p < .001$), Hardheadedness ($p < .001$), Manipulative ($p < .001$), Cognitive Empathy – Perspective Taking ($p = .026$), Modesty ($p < .001$), and Emotional Empathy – Concern for Other ($p < .001$). There were no significant differences between male and female scores on the Trust in Human Nature ($p = .082$) and the Societal and Economic Equality ($p = .493$) subscales.

Pearson's correlation coefficients were also calculated to assess the strength of relationships between the nine subscales and age. Weak yet statistically significant positive correlations were noted between age and the four subscales of: Socially Desirable Responding, Trust in Human Nature, Hardheadedness and Cognitive Empathy – Perspective Taking. Table 5.6 displays all the correlation coefficients between participant's age and score on the subscales.

Table 5.6. Correlations between participant's age and scores on the nine subscales

Subscale	Pearson's correlation
Inequality between People	-.040
Socially Desirable Responding **	.157
Trust in Human Nature **	.189
Hardheadedness *	.107
Manipulative	-.025
Cognitive Empathy – Perspective Taking *	.087
Modesty	.033
Societal and Economic Equality	-.021
Emotional Empathy – Concern for Others	.064

* Statistically significant correlation at the .05 level.
** Statistically significant correlation at the .01 level.

Scores for Socially Desirable Responding, Trust in Human Nature, Hardheadedness and Cognitive Empathy appeared to be higher for older adults. On inspection of the scatter plots the relationships appeared to be linear for the significant correlations. However, data points were randomly dispersed on the plots in the most part, supporting the conclusion of very weak correlations, although significant.

5.4. Discussion

Qualitatively derived themes and empirical findings from a psychometric approach have resulted in the formulation of a questionnaire measure consisting of nine dispositional subscales: Inequality between People; Socially Desirable Responding; Trust in Human Nature; Hardheadedness; Manipulative; Cognitive Empathy – Perspective Taking; Modesty; Societal and Economic Equality; and Emotional Empathy – Concern for Others, and 14 demographic and situational items. Logical analysis and exploratory factor analytic techniques have verified satisfactory levels of internal consistency and validity for the dispositional subscales. PCA allowed for the development of unidimensional and short refined subscales with reasonable alpha correlation coefficients and good item-total correlations. The paper and online methods for administering the dispositional, demographic and situational items (including their response formats) were successfully piloted with minor alternations required,

suggesting suitability for using these methods for the revised and refined version of the questionnaire to assess for associations with care work.

The main aim of this research was to incorporate the subjective experiences of paid care workers from Chapter 4 with the literature on motivations and traits associated with decisions to engage in health and social care giving behaviours more generally from Chapter 2, in order to develop a psychometric measure appropriate for the assessment of individual differences associated with participation in care work. The developed measure (see Appendix 16 for versions of the final questionnaire) related well to the personality traits, demographic and situational factors identified as associated with a preference to engage and remain in care work. Aspects of the situational and demographic items, as intended, related well to findings from the qualitative theme 'practical benefits of care work', such as other care giving responsibilities, and religious convictions under the 'challenging perceptions of care work' theme. The nine subscales of the questionnaire also successfully conveyed attributes noted in the first four qualitative themes.

'Care work as a propensity and identity', the first of the qualitative themes, covered dispositions such as: patience, tolerance, understanding, respectfulness, and sensitivity. The Modesty subscale developed in this research, shared the humility and unassuming nature reflected in aspects of this theme, which were required to take into account the needs of others, respectfully and patiently, over one's own personal aspirations and achievements. Two particular dispositional prerequisites consistently mentioned as salient to care work under this theme were adaptability and ability to perspective take. These related well to the subscales Hardheadedness and Cognitive Empathy – Perspective Taking respectively. Hardheadedness was in many respects the opposite of adaptability as discussed under this theme. Flexibility and compliance to the situation of others (i.e. the service user) in care work, countered the stubbornness and persistence in attitudes and opinions conceptualised in Hardheadedness. The Cognitive Empathy – Perspective Taking subscale also encapsulated well the ability to consider the perspective of another and to take this into account in most situations. De Waal (1996, 2008) has suggested more generally that empathic perspective-taking is a necessary proximate mechanism for targeted help, taking into account the specific aspects of a situation and adjusting helping behaviour accordingly. The Hardheadedness and

Cognitive Empathy subscales may prove useful for capturing such dispositions in care workers.

The second qualitative theme, 'close relationships in care work', revealed the proximity and intimacy of the care worker and service user relationship and the inevitable concern, emotional commitment and rewards from the relationship. The Emotional Empathy – Concern for Others subscale mapped well with this disposition to personally and emotionally commit and feel concerned for the needs of others. This affective concern mechanism has also been implicated by others as a proximate mechanism that motivates providing assistance to others (Nichols, 2001). Batson and colleagues (1997) have posited that emotional empathic concern evokes helping intentions, with the concerned feelings associated with empathy making a significant contribution to predicting intentions to help others (Kruger, 2003). In line with this proposal, experimentally inducing feelings of concern for others in a prisoner's dilemma game produced more cooperative behavioural choices in the players (Batson & Moran, 1999).

The third qualitative theme, 'prosocial preferences and making a difference' entailed the preference and personal commitment to wider prosocial proclivities in behavioural and ideological terms. This was regarded as important at an individual relationship level, as well as a societal level. The subscale Inequality between People runs counter to this and assesses the opposite; high scorers on this subscale have a preference for more inequitable relationships between people, thus capturing the reverse. The Manipulative subscale also runs counter to prosocial preferences and amenability, capturing a tendency to manipulate others for personal gain. Two of the other subscales align well with preferences for equitable, open and prosocial relationships between people (Trust in Human Nature) and between societal groups (Societal and Economic Equality), capturing both the behavioural and the ideological aspects of this. Similar to agreeableness and empathy, research has demonstrated that prosocial values and preferences have been associated with activities such as giving to charity, donating blood and organ donation (Bekkers, 2006; Van Lange, 1999; Van Lange et al., 2007). Increased social investment preferences have also been related to higher social functioning and increased social support networks (Cohen & Janicki-Deverts, 2009; Lodi-Smith & Roberts, 2007).

'Challenging perceptions of care work', the fourth qualitative theme, concerned how care work was viewed and considered by others. In particular, sensitivity was reported in relation to the conflict between sources of criticism and sources of motivation. The views of other people appeared to be important under this theme, and may have influenced decisions to engage in care work. The Socially Desirable Responding subscale; i.e. responding and behaving in ways that promote a positive perception among others, related well to the sensitivity care workers' showed towards the perceptions of others in this aspect of the theme. Previous research has also supported the role of public appraisals in the motivation to help others. Willingness, in a real-life situation, to engage in a charitable act has been associated with sympathy, trustworthiness and whether the request is made in the presence of others (Bereczkei et al., 2007). Social Desirability may be interacting with personality traits to produce a greater desire to help others in need.

There was overall coherence between the qualitative themes and the findings from the exploratory factor analysis, but some differences existed in the findings from both the descriptions care workers gave of their decisions to engage and remain in care work, and the dispositional findings in this adult sample. The subscales developed to assess for individual differences associated with participation in care work have captured the main dispositional and prosocial preferences noted in the interviews with care workers, as well as the suggested psychological mechanisms selected for, to perpetuate a mutually cooperative behavioural strategy (Axelrod & Hamilton, 1981; Trivers, 1971). Empathy, prosocial values and aspects of agreeableness all feature in the developed measure (de Waal, 2008; Nettle, 2006, 2007a; Trivers, 1971).

The questionnaire measure developed in this study to assess for associations with care work will be validated and used to predict specific individual differences between those that engage in care work, and those engaging in other non-care sector occupations at a similar socioeconomic level in the following chapter (Chapter 6). If the sample size is large enough, validation of the internal factor structure with confirmatory factor analysis will be conducted. A further test of the validity of the nine dispositional subscales will be to correctly predict individual differences in scores (Tabachnick & Fidell, 2007) on the subscales for care worker and non-care worker samples. Successful predictions in line with a theoretical approach that views care work as a mutually beneficial

behavioural strategy will result in better understanding of why individuals decide to engage and remain in care work. The following chapter will make such predictions, informed by evolutionary theory and empirical findings on care workers and their motivations.

6. Assessing for associations with participation in care work

6.1. Introduction

The purpose of this quantitative study was to assess for demographic, situational and dispositional factors and preferences likely to be associated with engagement in care work. Based on the qualitative findings from Chapter 4, and the literature review from Chapter 2, predictions can be made on how care workers might differ from individuals engaged in other similarly low skilled occupations. This questionnaire study aims to identify the individual differences and preferences associated with participation in care work, with the underlying assumption that care workers are adopting a mutually cooperative social strategy.

As previously reviewed, there is evidence to suggest that females may gain more from the social relationships formed in care work than males, with harmonious social relationships offering greater fitness gains for females than for males (Hrdy, 2009; Nettle, 2007a, 2007b), which appears to influence female preferences in occupational choices (Browne, 1998, 2004). The evidence on sex differences in terms of giving help to others is somewhat inconsistent (Kerbs, 1970), although some have suggested that helping behaviour is very much dependent on the interaction between situational factors and the sex of the individual giving the help (Latané & Darley, 1970). Evidence from the volunteering literature supports a sex difference in the motives for giving help to others, which may be dependent on personal circumstances as well (Chervier, et al., 1994; Ibrahim & Brannen, 1997; Roessler, et al., 1999).

Relative to the working population, older females tend to gravitate towards care work more so than those who are either younger females or male (Eborall & Griffiths, 2008; Hussein, 2009; Skills for care, 2012). Personal situational factors, such as care responsibilities for others, may be associated with age and could account for engagement in care work among older female care workers. Those who choose to engage in care work at an older age could be facing a phase of investment in child-rearing or care for elderly relatives, where the flexible hours and care capabilities could be suited to paid care work. The interview findings reported in Chapter 4 supports the

view that care workers may have past or current investments in caring for others, which may have motivated their interest in, or further utilised a predisposed preference to the care for others. In the volunteering literature, older volunteers were more likely to allude to rewards such as feeling of value and previous experiences of loss in their motives for volunteering in palliative care, whereas younger volunteers sought motivational rewards from being of value to others, but were also motivated more by gaining recognition from others for their work or gaining relevant work experience (Chervier, et al., 1994; Rawlins & Houska, 1986; Roessler, et al., 1999).

Religious affiliation also featured as a motivating factor for some of the participants interviewed in Chapter 4. Religious prosocial behaviours have been linked to reputational concerns in a review of the empirical evidence (Norenzayan & Shariff, 2008). Religion was also mentioned by some (see Chapter 4) as a means to weather the negative views of others, or to cope with difficult experiences in care work.

Notable from the demographic data reviewed in Chapter 2 was the large proportion of migrant care workers (Cangiano et al., 2009; Hussein et al., 2011). There is evidence to suggest that migrant care workers are engaging in a mutually beneficial strategy, where care is exchanged for larger social network benefits (Ayalon, 2009; Doyle and Timonen, 2009; McClimont and Grove, 2004). Immigrants with limited networks for emotional and social resources (a particular consequence of the displacement associated with migration) may benefit greatly from the local knowledge, advice and social networks that emerge from the investment in care recipients (Doyle and Timonen, 2009). As previously stated, this thesis argues that the preference for care work, over other equally viable occupations, is capturing individual preferences for forming social alliances, with the willingness to tolerate a low wage. The value gained from forming these social alliances at work, and not having to seek these resources additionally elsewhere, may offset the lower wage.

Entailed within this is a mutually beneficial strategy. For these cooperative interactions to occur, certain proximate psychological mechanisms are required to enable the care investment to others.

These psychological mechanisms vary to a certain degree between individuals, in a stable manner over time and in reactions to different situations, and they are also highly heritable (Denissen & Penke, 2008; Nettle, 2006; Polmin et al., 2008; Rushton et al., 1986). They solve frequent and persistent adaptive problems and are imperative to inclusive fitness (Buss, 1996; Buss & Greiling, 1999; Nettle 2006). In Chapter 2 some of these mechanisms were outlined, including empathy, behaviours associated with the agreeableness trait, prosocial preferences, and oxytocin as the probable neuropeptide mediating prosocial and care behaviours. Empathy in particular was considered as a psychological mechanism directed to trigger the benefits of cooperation by motivating help to others (de Waal, 2008; Kenrick, 1991; Preston & de Waal, 2002), with agreeableness also endowing benefits, such as more harmonious social relationships and the advantages arising from good social support networks (Nettle, 2006, 2007a). Both of these aspects featured in the interview findings from Chapter 4, and were consistent with characteristics identified in previous studies with other care professionals and trainees, which explored their motivations for helping others in an occupational context (Hojat et al., 2005; McManus, Livingston & Katona, 2006; Meir et al., 2007; Parker & Merrylees, 2002).

In this chapter, the questionnaire developed in Chapter 5 is used in a survey to assess for relevant demographic, situational and dispositional factors associated with care work. In line with previous findings outlined in Chapters 2 and 4 and summarised above, one would predict that in comparison to a sample of similar socioeconomic status and educational attainment, care workers in this study would more likely be: born and educated outside of the UK, female, older, religious, have children and other care responsibilities. Furthermore, for the nine dispositional subscales, one would predict that care workers would score lower on Inequality between People, Hardheadedness and Manipulative subscales; and higher on Socially Desirable Responding, Trust in Human Nature, Cognitive Empathy – Perspective Taking, Emotional Empathy – Concern for Others, Modesty, and Societal and Economic Equality subscales. Although not an explicit aim of this study, use of this developed questionnaire with samples where one would expect differences to occur further contributes to establishing the validity of these subscales.

To more explicitly assess for a greater preference for mutualism amongst care workers in social interactions, a task measuring Social Value Orientation (SVO; McClintock, 1978; Messick & McClintock, 1968; Van Lange et al., 1997) was also administered to care workers and individuals working in similarly low skilled occupations, in order to identify the extent to which preferences for prosocial mutualism are common amongst care workers in comparison to individuals in other non-care occupations. The relationship between prosocial SVO and helping others has been reviewed in Chapter 2, in relation to giving to charity and donating organs post-mortem (Bekkers, 2006; Van Lange et al., 2007). Additionally, those with a prosocial preference also tend to offer more time in helping others in charitable situations (McClintock & Allison, 1989). The expectation for this study was that those engaging and remaining in care work would prefer prosocial outcomes, supporting a general tendency towards mutualistic gains over individualistic or competitive ones, i.e. preference for proself outcomes.

The purpose of this study was to identify these individual differences between care workers and other occupational groups. Bivariate statistics were employed to assess for significant relationships between predictors (demographic, situational, dispositional, and preference predictors) and the outcome variable, participation in care work. Binary logistic regression analyses were used to assess the relative importance of the significant predictors to the probability of participating in care work. Identification of these differences, as predicted, may provide support for the theory that care workers are employing a mutually cooperative social strategy.

6.2. Methodology

6.2.1. Recruitment

Two separate recruitment procedures were required to obtain the care worker and the non-care worker samples for this study. I recruited the care worker sample through contacts made with adult home care provider organisations registered with the Care Quality Commission (CQC) in London, Essex and Warwickshire. Of the 127 home care provider agencies contacted, 11 agreed to assist with recruitment, eight from Essex, two from London, and one from Warwickshire. To ensure data protection of personal information, individual care workers were approached with an invitation to participate

in the study made through their employer. They were given information about the study, copies of the consent form, a copy of the questionnaire and a prepaid envelope. These were either sent to prospective participants through regular weekly/monthly staff information mailings, or were given to care workers when visiting the head office to collect rotas, payslips or for training purposes.

For the non-care worker sample, I used purposive sampling in London, Essex, Nottingham and Warwickshire to recruit adults employed in similarly low skilled work to care work. I defined low skilled work in terms of limited or no qualifications, training, or work experience required to perform the tasks associated with the job. I invited individuals to participate in the questionnaire survey if they worked in: low skilled administrative or secretarial occupations; sales and customer service occupations; were process, plant or machine operatives; or worked in elementary occupations requiring a short period of formal experience-based training (i.e. labourer, packer, courier, porter or cleaner), as categorised by the Standard Occupational Classification (SOC2000; ONS, 2000). I contacted potential participants fitting the recruitment criteria about the survey using my social networking site, personal emails, and personal contacts. Potential participants were either given paper copies or electronic copies of the information sheet about the study, the consent forms, and the questionnaire. I also sent prepaid envelope to those that received paper copies of the abovementioned documents. The four main occupational classifications sought were specified in the accompanying letter or email. Individuals in occupations congruent with those sought were asked to complete the questionnaire and forward the information about the questionnaire survey to their colleagues.

6.2.2. Participants

Two hundred and seventeen individuals responded to invitations to participate in the research, of which ten were removed for not being employed in one of the sought after occupations. Of those excluded, two were managers, two were professionals, one did not specify an occupation, and six identified their current main job as being an undergraduate student. The remaining 207 participants worked in: personal care occupations (98), administrative or secretarial occupations (55); sales and customer

service occupations (45); were process, plant or machine operatives (2); or worked in elementary occupations (7) (SOC2000; ONS, 2000).

The total sample consisted of 34 males and 173 females, ranging in age from 18 to 71 years old, with a mean age of 32 (Std. Deviation 11.27). The majority of participants (59%) were educated to A-level, the vocational equivalent, or below, and were born (59%) and educated (65%) in the UK. In terms of ethnic origin, 43% identified themselves as White British, 17% as White Other, 23% as Black African or Caribbean, 10% as Asian, and 7% as being of mixed ethnic origin. Three-quarters of the participants reported being religious, with denominations of Christianity being the most frequently reported religions (62%). The majority of the participants also reported being in a relationship (68%) and did not have any children (66%). A full breakdown of demographics by care worker (n=98) and non-care worker (n=109) samples are reported in the findings of this chapter.

6.2.3. Materials

Information sheets were constructed to advertise and inform potential participants about the purpose of the questionnaire survey and what participation in the study would involve. The information sheet contained full details about the research question, background to the study, and the methods by which to complete the questionnaire. The recruitment criteria and right to withdraw at any time were also detailed along with the assurance of confidentiality of personal information, and the restricted use of the data. Contact details were also given for further information. Copies of the consent form accompanied the information sheet. The consent form was designed to confirm that participants understood the contents of the information sheet and agreed, in writing, to take part in the study. The full information sheet and consent form are available in Appendices 13 and 14 accordingly.

The questionnaire itself was split into three sections. The first section consisted of 14 demographic and situational items, including questions about age, sex, ethnicity, relationship status, occupational status and care responsibilities. All questions had been piloted during the development of the questionnaire study in Chapter 5.

The second section consisted of 43 selected items from the nine dispositional subscales developed in Chapter 5. These items were statements describing different attributes and behaviours to which participants responded by stating their level of agreement with the statement from the following Likert response options: (1) Strongly Disagree, (2) Disagree, (3) Neither Agree or Disagree, (4) Agree, and (5) Strongly Agree. The Inequality between People subscale (e.g. *Some people are just inferior to others*) consisted on four items, as did the Manipulative subscale (e.g. *Some people think of me as cold and calculating*). Neither of these subscales contained any reverse score items. The remaining seven subscales consisted of five items per subscale: Socially Desirable Responding (e.g. *I have never cheated at a game*); Cognitive Empathy – Perspective Taking (e.g. *I try to look at everybody's side of a disagreement before I make a decision*); Emotional Empathy – Concern for Others (e.g. *I am often quite touched by things that I see happen*); Trust in Human Nature (e.g. *My first reaction is to trust people*); Hardheadedness (e.g. *I'm hard-headed and stubborn*); Modesty (e.g. *I'd rather not talk about myself and my achievements*); and Societal and Economic Equality (e.g. *Human need should always take priority over economic considerations*). The latter four subscales contained at least one reverse score item. See Appendix 15a for a full list of items by subscale.

The third section of the questionnaire consisted of a nine-item decomposed ultimatum (bargaining) game technique to assess for stable patterns in preferences of outcomes for one's self and another, known as Social Value Orientation (SVO; McClintock, 1978; Messick & McClintock, 1968). The task was based on a previously developed decomposed game technique using a three category typology of SVO, in order to examine differences between prosocial, individualistic and competitively oriented individuals (Van Lange, 1999; Van Lange & Kuhlman, 1994; Van Lange et al., 1997). This task was used in to order to compare outcome preferences in social interactions between care workers and non-care workers that would be hypothetical and independent of the occupations they were currently engaged in, use of a more realistic scenario may have favoured certain responses in one occupational group over the other.

The task involved making decisions about combinations of outcomes one would receive and another person would receive. Each of the nine items in the task contained three different options, in terms of points to self and points to another. For example, one of

the options would be a competitive option, where there would be a large difference between outcomes for self and the other (e.g. 480 points to self, 80 points for other). In comparison, the individualistic option would have a greater outcome for self than either the competitive and prosocial options for the self (e.g. 540 points to self, 360 points for other). For the prosocial option, a larger combined outcome for the self and the other would be received, than in the competitive and individualistic options, however there would be the least discrepancy between the self outcome and the other's outcome points (e.g. 480 point to self and 480 points to other).

Supplementary instructions to the task specified that they did not know the other person in the scenario, and would never knowingly meet them again in the future. They were also directed that the other person in the scenario would also make choices to create some interdependence between themselves and the other person, and to imagine that the points had value to themselves and the other person. The SVO outcome preference was ascertained when six or more of the option choices were the same out of a possible nine. This measure of SVO has good internal consistency and test-retest reliability over periods ranging from 2 months to 19 months (Van Lange et al, 1997). For instructions and the full list of items included in the SVO task see Appendix 15b.

Two versions of the questionnaire were produced. The contents of the questionnaires were exactly the same in both versions, with the exception of order of presentation. For one version of the questionnaire the SVO task was presented after the demographic questions section and before the dispositional items section. For the second version the SVO task was presented after the demographic and dispositional items sections. This was to ensure that any effects of section order in responding, based on the inclusion of SVO task, were counterbalanced. Finalised items, response structure and presentation order for both versions of the questionnaire can be found in Appendices 16a and 16b.

Pilot

Once both versions of the questionnaires to assess for associations with care work were constructed, they were piloted with 31 undergraduate students (26 females and 5 males, mean age = 27 years old, std. deviation = 7.88). Fifteen participants completed the first version of the questionnaire and sixteen completed the second version of the

questionnaire. Although both the demographic questions and dispositional items had been piloted and utilised in the development stage of the questionnaire in Chapter 5, the SVO task had not been piloted and previously used in this research.

Of the 31 participants, 27 participants could be categorised with an SVO preference based on six or more choices of the same type of outcome: 8 had a prosocial SVO, 14 had an individualistic SVO, and 5 had a competitive SVO. Using Fisher's exact test of association between questionnaire versions and SVO outcome preference, there was no signification association between the two (3.22, $p = .237$). This indicated that responses on the SVO task were not related to order of presentation of the task, before or after the dispositional items section. The participants in the pilot raised no issues with ambiguous items, instruction clarity and response format. The questionnaires remained unchanged for use with the larger sample of care workers and non-care workers.

6.2.4. Administration of the Questionnaire

The questionnaire to assess for associations with care work was administered by two methods, on paper (in person or by post) or online. The majority of the participants (75%) completed the questionnaire on paper and sent responses back to the researcher in the post, using the prepaid addressed envelopes provided. The remaining quarter of participants completed the questionnaire via the online version using SurveyMonkey.com (SurveyMonkey.com LCC, 1999). There were no apparent issues arising from using two questionnaire formats to elicit responses. The online version followed the same presentation order of items as the second version of the questionnaire (see Appendix 16b).

The paper version was presented with an information sheet and a consent form either in person, or sent in the post. The information sheet was constructed to inform potential participants about the purpose of the study and what would be involved. The information sheet contained full details about the research question, background to the study, and outlined what participation in the study would involve. In addition, the study recruitment criteria and right to withdraw at any time were also detailed along with the assurance of confidentiality of personal information, and the restricted use of the data. Contact details were also given for further information. The consent form was designed

to confirm that participants understood the contents of the information sheet and agreed, in writing, to take part in the study. The form confirmed that consenting to participate was voluntary, and that they could withdraw from the study at any time. The consent form was signed before participants could complete the questionnaire. Contents of the information sheet and consent form are available in Appendices 13 and 14 respectively. After completing the questionnaire, participants posted or returned the questionnaire to the researcher in person.

The same information conveyed in the information sheet was also given on the first screen of the online version, with the additional assurance that responses would be transmitted through secure encrypted URLs, using Secure Socket Layer (SSL) technology. Participants needed to click 'yes' to a consent question before they could proceed with the online version of the questionnaire. The URL for the questionnaire was sent in personal emails and posted on the researcher's social networking site. Completed responses were downloaded onto an Excel spreadsheet and were recorded by Internet Protocol (IP) address, to ensure responses were from the UK. No other identifiable information was asked for or retained.

Ethical approval for the study was granted by the University of East London Ethics Committee (see Appendix 17 for confirmation).

6.2.5. Data Analysis

After data collection for the questionnaire survey was completed, responses given to the demographic and situational questions, the dispositional subscales, and the SVO task were checked and analysed for associations with participation in care work. This was conducted using three levels of analysis: descriptive associations, inferential analysis for bivariate associations, and multivariate analysis for associations using logistic regression. SPSS version 18 was used to aid analysis at all three levels.

Prior to these analyses, it was also anticipated that Confirmatory Factor Analysis (CFA) would be conducted with responses from the items of the nine dispositional subscales to further verify the underlying factor structure. However, with missing data on the subscales for ten cases removed listwise, this left a valid N = 197. A reasonably large

sample size was required for CFA (Howlett & Cramer, 2011), with a five participants to one item ratio considered the absolute minimum in terms of sampling adequacy for factor analytic techniques (Bryant & Yarnold, 1995). For the 43 dispositional items contained within the nine dispositional subscales, an absolute minimum sample size of 215 cases was required for sufficient power and a stable solution. As this requirement was not met, confirmation of the developed subscale structure using CFA was not conducted. Internal consistency in responses to items within the nine dispositional subscales was examined using Cronbach's alpha, which indicated reasonable internal consistency within the subscales (between .60 and .79). Item-total correlations and Cronbach's alphas are further detailed in Appendix 18.

Descriptive Comparisons

Descriptive statistics were primarily used to describe the sample. They were also used to ascertain descriptive relationships with the nominal outcome variable, participation in care work. Twenty-five variables were coded from the questionnaire responses to the demographic and situational questions, the nine dispositional subscales items, and the SVO task. Appendix 19 contains a complete list of the 25 predictor variables by level of measurement and codes for descriptive and subsequent bivariate analyses. The nine nominal level variables were descriptively analysed by calculating the frequencies and percentages in cross-tabulations with the outcome participation in care work variable to identify potential associations. For the 12 ordinal level and four interval level variables, means and standard deviations were calculated separately for the two occupational groups in the outcome variable to describe any potential associations with participation in care work.

Bivariate Analysis

Bivariate associations and tests of difference between the 25 predictor variables and the participation in care work outcome variable were also conducted to determine strength of association and level of significance. For associations between the nominal predictors and the nominal outcome variable, statistical significance was calculated using Fisher's exact test for comparison between the frequencies observed in the cross-tabulations and the frequencies expected by chance. To assess for strength of

association, Cramer's V was calculated as a measure of effect size. Most of the nominal variables had two categories, with the exception of the SVO and the Ethnic group variables that had three and four categories respectively. Cramer's V was chosen over Phi and Contingency Coefficient as values fall between 0 and 1, even for variables in excess of two categories, allowing for ease of interpretability (Field, 2009).

Independent samples Mann-Whitney tests were used to test for significant differences between means on the ordinal and interval predictor variables and participation in care work variable. Most of the predictor variables were ordinal, and all of the internal level predictor variables were right skewed to some degree, potentially violating the parametric assumption of normally distributed data and making a non-parametric alternative to the t-test the more appropriate test for statistical significance (Field, 2009). The strength of the effect was judged using Cohen's (1988) criteria for comparable *r* approximate effect sizes; where .1 was considered a small effect size, .3 a medium effect size, and .5 or greater was regarded as a large effect size.

Before proceeding with multivariate analysis, predictors with statistically significant associations to participation in care work were assessed for correlations (using Spearman's rho) between themselves to inspect for any highly correlated predictor variables that may indicate issues with multicollinearity. Collinearity can lead to uncertainty regarding the parameter estimates, leading to increases in the standard errors. This was the first step to detecting multicollinearity between predictors. Although examining a correlation matrix may identify strong associations for bivariate correlations, multiple correlations were the main cause for concern in terms of shared variance, and these may present as weak correlations in a correlation matrix (Miles & Shevlin, 2001). To more accurately detect collinearity, tolerance and variance inflation factor (VIF) diagnostic statistical tests were also carried out prior to multivariate analysis to detect collinearity and deal with it appropriately (Howlett & Cramer, 2011; Miles & Shevlin, 2001).

Multivariate Logistic Regression

Predictor variables with significant associations and reasonable effect sizes with the outcome participation in care work variable were selected for multivariate analyses.

Logistic regression analysis was used to assess for the relative importance of the significant predictors to the probability of participating in care work. Also, to determine to what extent these variables predict participation in care work independently of each other. Binary logistic regression analysis was selected over ordinary least squares (OLS) regression, which is restricted by the assumption of linearity between the outcome variable and the predictors (Garson, 2010). Participation in care work was a binary categorised outcome variable and hence non-linear. This outcome variable was transformed using the natural logarithm of the odds ratio, known as a logit transformation, making it suitable for regression analysis where the logit of the outcome variable has a linear relationship to the continuous predictors in the model (Field, 2009).

Whereas OLS regression is concerned with modelling the individual contribution of predictors to the value of the outcome variable, logistic regression applies maximum likelihood estimations to calculate the probability (odds) of the outcome occurring. It is changes in the odds of the outcome variable, based on the predictors, not changes in the outcome variable itself that are calculated by logistic regression (Garson, 2010). This was suitable for examining changes in the odds of participation in care work occurring, based on the inclusion of demographic, situational and dispositional predictors.[4]

A combination of categorical and continuous predictors was entered into logistic regression. Binary categorical predictors and continuous predictors were entered unaltered. Predictors with more than two categories needed to be re-coded into dummy variables, with one category representing the presence of the attribute, and the others

[4] An alternative approach to analysing this data would have been to treat the study as quasi experimental using multivariate GLM instead (McDonald, 2009). Participation in care work would have then been the independent variable and the dispositional variables would have been the dependent variable, with demographic variables and SVO functioning as covariates. The logistic regression model was a better fit for three reasons. First, participation in care work has been conceptually presented throughout this thesis as the consequence of prior dispositional and demographic factors. In this sense, I am treating the outcome in much the same manner as an epidemiologist would (Hosmer & Lemeshow, 2000; Tabachnick & Fidell, 2007). The outcome is not free to vary (e.g. such as having heart disease or not) and the predictors (e.g. family history, lifestyle) are suggested to contribute to the outcome in a predictive way. Second, ANCOVA would have required the covariates to be independent of the main independent variable in contributions to the variance explained in the personality variables. Based on the bivariate analysis in Chapter 5 and in this chapter, sex and participation in care work are unlikely to be orthogonal in their contribution to the variance explained in the personality variables. Finally, non-representative sampling is only considered problematic for logistic regression if participation in care work was considered a rare occurrence. From the examples of rare cases/events set out by King and Zeng (2001) this would not seem to be the case for participation in care work.

representing the absence of the attribute as a baseline. For the analysis, only one predictor, the SVO categorised variable needed to be re-coded into a dummy variable. The 'prosocial' category of this variable was the most relevant to the research aims, and the most frequent, therefore this was assigned a '1' on a 'Prosocial SVO' dummy variable, whilst the 'individualist' and 'competitive' categories were combined and assigned a '0' on new Prosocial SVO predictor.

Due to the exploratory nature of this research and lack of empirically supported findings, the order of variable entry for multivariate logistic regression was determined using Backward Likelihood Ratio (LR). Although some researchers take issue with the use of stepwise methods of entry in regression analyses (Miles & Shevlin, 2001), others (Field, 2009; Menard, 2001) defend their use for exploratory purposes when the researcher does not intend to establish causality and current theory is empirically unsupported (Menard, 2001). Backward elimination methods have also been preferred over Forward inclusion methods, as all predictors start in the model, which presents a lower risk of type II errors occurring due to suppressor effects. Similarly, using the Wald statistic over LR as the removal criteria, on occasion, can lead to inflated standard errors resulting in a type II error (Field, 2009). Backward LR and Forward LR methods usually produce the same results; however in the event that this does not occur, backward elimination uncovers associations missed by forward inclusion (Menard, 2001).

6.3. Findings

6.3.2. Descriptive Comparisons

Within this section descriptive statistics describe differences between the predictors (see Appendix 19) and the outcome variable, participation in care work. Demographic and situational predictors are presented first, followed by the nine dispositional predictors and the SVO task. Full figures are presented in the accompanying tables and summaries of the main differences between the non-care worker and care worker samples are provided in the text.

Demographic and Situational Predictors

Cross-tabulations of frequencies and percentages were calculated for the non-care worker and care worker samples by sex, ethnic group, affiliation with a religion, being in a relationship, having children, providing regular unpaid care, being born in the UK and being educated in the UK.

Of these demographic and situation predictors, the care worker sample contained proportionally fewer males and less individuals from White and Asian ethnic backgrounds, but proportionally more individuals from Black ethnic backgrounds, than the non-care worker sample did. The care worker sample more frequently had children and were born and educated outside of the UK, in comparison to those in the non-care worker sample. Being religious, being in a relationship, and providing regular unpaid care to someone was proportionally similar, with less than a 5% difference, between the non-care worker and the care worker samples. Table 6.1 displays the percentages and frequencies of the demographic and situational predictors by occupational group. These differences are explored further in section 6.3.3 of this chapter.

Means and standard deviations were calculated for the non-care worker and care worker samples by age, educational level, socioeconomic status (SES) based on father's main occupational status, SES based on mother's main occupation, period in current job, number of children, and age when first child was born. On average the care worker sample was approximately 3 years older than the non-care sample. In terms of average level of educational attainment, average SES based on father's main occupational status, average SES based on mother's main occupation, and average period in current job; little difference was exhibited between the two occupational samples. The average number of children appeared slightly higher for the care worker sample and average age when the first child was born was slightly younger for the care worker sample, but these differences were small. See Table 6.2 for a full comparison of means and standard deviations for demographic and situational predictors by participation in care work.

Table 6.1. Percentages and frequencies of demographic and situational characteristics by non-care worker and care worker samples

Demographic / situational characteristic	Percentages by occupational group (frequencies)	
	% of Non-care workers (n=109)	% of Care workers (n=98)
Sex		
Male	23 (25)	9 (9)
Female	77 (84)	91 (89)
Ethnic group		
White	65 (71)	55 (54)
Black	17 (19)	29 (28)
Asian	13 (14)	6 (6)
Other	5 (5)	10 (10)
Religious		
No	27 (29)	22 (22)
Religious	73 (80)	78 (76)
In relationship		
No	29 (32)	29 (28)
Yes	71 (77)	71 (70)
Have children		
No	75 (82)	55 (54)
Yes	25 (27)	45 (44)
Provide regular unpaid care		
No	61 (67)	56 (55)
Yes	39 (42)	44 (43)
UK born		
No	37 (40)	47 (46)
Yes	63 (69)	53 (52)
UK educated		
No	31 (34)	40 (39)
Yes	69 (75)	60 (59)

Table 6.2. Means and standard deviations for demographic and situational characteristics by non-care worker and care worker samples

Demographic / situational characteristic	Means (std. deviations) by occupational group	
	Non-care workers (n=109)	Care workers (n=98)
Age (years)	30.52 (11.41)	33.61 (10.94)
Educational level (National Qualifications Framework/QQA)	2.88 (1.72)	2.95 (1.77)
SES (based on Father's occupation - SOC2000)	4.02 (2.78)	4.12 (2.64)
SES (based on Mother's occupation - SOC2000)	4.28 (2.26)	4.86 (2.17)
Period in current job (years)	4.65 (6.00)	4.60 (5.39)
Number of children (including those with no children)	.50 (1.05)	.99 (1.31)
Age when first child born (years)	25.80 (5.58)	24.57 (5.56)

Nine Dispositional Predictors

Means and standard deviations were calculated for the non-care worker and care worker sample on the nine dispositional subscales: Inequality between People, Societal and Economic Equality, Trust in Human Nature, Emotional Empathy – Concern for Others, Cognitive Empathy – Perspective Taking, Modesty, Hardheadedness, Manipulative, and Socially Desirable Responding.

On average the care worker sample scored slightly higher on Societal and Economic Equality, Trust in Human Nature, Emotional Empathy, and Socially Desirable Responding subscales, in comparison to the non-care worker sample. The care worker

sample also scored on average lower on the Hardheadedness and Manipulative subscales and slightly lower on the Inequality between People subscale, than the non-care worker sample did. Average scores on the Cognitive Empathy and Modesty subscales differed little between the care worker and non-care worker sample. In terms of distribution of scores, standard deviations for the care worker sample were slightly lower than for the non-care worker sample, reflecting less variance in the scores for this sample. Table 6.3 lists means and standard deviations for the nine dispositional subscales by occupational group below.

Table 6.3. Means and standard deviations for the nine dispositional subscales by non-care worker and care worker samples

	Means (std. deviations) by occupational group	
Dispositional subscale	Non-Care Workers (n=103)	Care Workers (n=94)
Inequality between people	9.81 (3.63)	9.57 (3.42)
Societal and economic equality	18.33 (3.06)	19.01 (2.92)
Trust in human nature	16.72 (3.34)	17.40 (2.90)
Emotional empathy – Concern for others	19.92 (2.78)	20.84 (2.53)
Cognitive empathy – Perspective taking	19.57 (2.71)	19.52 (2.62)
Modesty	17.24 (3.61)	17.43 (3.00)
Hardheadedness	15.33 (3.75)	13.60 (3.04)
Manipulative	9.04 (2.99)	7.90 (2.79)
Socially desirable responding	14.09 (3.76)	15.86 (3.58)

Social Value Orientation (SVO) Predictor

Cross-tabulations of frequencies and percentages were calculated for the non-care worker and care worker samples by the three categorisation of the SVO task: Prosocial, Individualistic and Competitive. Prosocial was the most common social value orientation in both samples, followed by Individualistic and finally Competitive.

However, a greater proportion of the care worker sample had a Prosocial SVO, in comparison to the non-care worker sample. In turn, the non-care worker sample had a greater proportion of participants with an Individualist or Competitive SVO. Notably, the care worker sample had no participants with a Competitive SVO. See Table 6.4. below for a comparison between SVO and participation in care work for all three categorisations.

Table 6.4. Percentages and frequencies of social value orientations (SVO) by non-care worker and care worker samples

Social Value Orientation	Percentages by occupational group (frequencies)	
	% of Non-care workers (n=93)	% of Care workers (n=87)
Prosocial	68 (63)	85 (74)
Individualistic	22 (21)	15 (13)
Competitive	10 (9)	0

Summary of Descriptive Comparisons

Of the demographic and situational predictors, descriptive differences were apparent between the care worker sample and non-care worker sample for sex, age, ethnic group, having children, and being born and educated outside of the UK. The care worker sample had proportionately more females, were older, with more participants from Black ethnic backgrounds, were more likely to have children, and be born and educated outside of the UK. As for the dispositional predictors, care workers appeared to score higher on Societal and Economic Equality, Trust in Human Nature, Emotional Empathy and Socially Desirable Responding, but lower on Hardheadedness and Manipulative subscales, compared to the non-care worker sample. The care worker sample more frequently had participants with a prosocial social value orientation, in comparison to the non-care worker sample, and no participants with a competitive social value orientation. The next section aimed to determine whether the descriptive differences

noted between the care worker and non-care worker samples were statistically significant and suggestive of relationships between predictor variables and participation in care work.

6.3.3. Bivariate Analysis

The previous section described the relationships between the predictors and the outcome variable, participation in care work. Within this section, bivariate analyses were used to test for statistically significant associations with participation in care work. Independent samples Mann-Whitney tests were used to test for significant differences between means on the ordinal and interval predictor variables (see Appendix 19) and participation in care work variable. Fisher's exact test was used to test for associations between participation in care work and the nominal predictors (see Appendix 19) with Cramer's V used to calculate and measure effect size. Spearman's rho correlation coefficients were used to test for associations between predictors. This non-parametric alternative to Pearson's *r* was used for the interval level predictors after examination of the histograms indicated that: age (skewness = 1.26, kurtosis = 1.11), period in current job (skewness = 3.34, kurtosis = 15.85), number of children (skewness = 1.68, kurtosis = 2.29), and age when first child was born (skewness 1.03, kurtosis = .75) were all right skewed to some degree, violating the parametric assumption of normally distributed data. All other non-categorical predictors appeared to be normally distributed.

Demographic and Situational Predictors

Cross-tabulations of frequencies and percentages were calculated in the previous section and displayed in Table 6.1 for the non-care worker and care worker samples by: sex, ethnic group, affiliation with a religion, relationship status, having children, providing regular unpaid care, being born in the UK and being educated in the UK. The contingency tables for each demographic predictor and the outcome variable were analysed using Fisher's exact test in order to assess the observed frequencies in each demographic category compared to those expected by chance. Two-by-two contingency tables were used for all the listed nominal demographic and situational predictors by non-care worker and care worker groups. Ethnicity was broken down into dummy variables to form three 2 x 2 contingency tables. For ease of interpretation, 'White

ethnic background' was compared to all other ethnic backgrounds, as were 'Black ethnic background' and 'Asian ethnic background', in order to form three dummy variables with two categories in each.

All data points were independent and expected frequencies in the contingency tables were all greater than five, meeting the assumptions of the chi-square test. However, the relatively small sample sizes (see McDonald, 2009) made Fisher's exact test the more suitable choice for use with this dataset.

No statistically significant associations with participation in care work were noted for the predictors of: White ethnic background (2.17, p = .156), Black ethnic background (3.65, p = .068), Asian ethnic background (2.67, p = .156), affiliation with a religion (.48, p = .521), being in a relationship (.16, p = 1.000), providing regular unpaid care (.61, p = .480), being born in the UK (2.23, p = .158) and being educated in the UK (1.67, p = .244). The descriptive comparisons suggested the possibility of an association with the outcome variable for ethnic groups, being born in the UK and being educated in the UK, however bivariate analysis indicated statistical independence.

The predictors of sex (7.11, p = .009) and having children (9.28, p = .003) did have statistically significant associations with participating in care work. In line with the findings from the descriptive analysis participation in care work was associated with being female and having children in comparison to participation in non-care occupations. Cramer's V indicated small effect sizes for sex and having children by participation in care work. See Table 6.5 below for a list of all effect sizes by nominal demographic and situational predictors.

Table 6.5. Effect sizes between nominal demographic and situational predictors and participation in care work

Demographic & Situational Predictor	Effect size (Cramer's V)
Sex	.185*
White ethnic background	.102
Black ethnic background	.113
Asian ethnic background	.114
Affiliation with a religion	.048
Being in a relationship	.009
Having children	.212*
Providing regular unpaid care	.054
Being born in the UK	.104
Being educated in the UK	.090

*Significant at the .01 level.

Mann-Whitney *U* test was used to test for significant differences between participation in care work and the continuous demographic and situational predictors: age, educational level, SES based on father's main occupational status, SES based on mother's main occupation, period in current job, number of children, and age when first child was born. Age and number of children appeared to differ between the non-care worker and care worker samples in the descriptive analysis, with care workers being older and having more children.

There was a statistically significant difference between the care worker and non-care worker sample on age ($U = 2.604$, p = .009), with a small effect size ($r_s = .181$). There was also a statistically significant difference between the care worker and non-care worker samples on the number of children ($U = 3.198$, p = .001), with a small effect size ($r_s = .223$). However, it is important to note that number of children was right skewed with 63% of the participants having no children; therefore it would be more appropriate to interpret this finding as a relationship between participation in care work and having children. A significant finding has already been noted in the 'have children' nominal

predictor with participation in care work in this section. The right skew in the continuous 'number of children' predictor variable would be unsuitable for multivariate analysis; therefore the 'have children' nominal predictor would be more appropriate in subsequent multivariate analyses.

As expected from the descriptive comparisons, there were no significant differences observed between the care worker and non-care worker samples for: educational level (U = .179, p = .858), SES based on father's main occupational status (U = .481, p = .631), SES based on mother's main occupational status (U = 1.956, p = .052) period in current job (U = -.331, p =.741), and age when first child was born (U = -1.042, p = .297).

Nine Dispositional Predictors

In the previous descriptive analysis section, Table 6.3 indicated that care workers on average scored higher than non-care workers on: Societal and Economic Equality, Trust in Human Nature, Emotional Empathy, and Socially Desirable Responding subscales. They also scored on average lower on the Hardheadedness and Manipulative subscales and slightly lower on the Inequality between People subscale. Of these dispositional predictors, Mann-Whitney U (one-tailed) indicated a significant difference between the care worker and non-care worker samples for Emotional Empathy (U = 2.328, p = .010) and Socially Desirable Responding (U = 3.292, p = .001), with small effect sizes (r_s = .167 and r_s = .235 respectively). Statistically significant differences were also noted between care worker and non-care worker samples for Hardheadedness (U = -3.409, p = .001) and Manipulative (U = -2.804, p = .003) subscales, with small effect sizes (r_s = -.244 and r_s = -.200 respectively).

These findings were as predicted; the care worker sample scored higher on Emotional Empathy and Socially Desirable Responding, but lower than the non-care worker sample on Hardheadedness and Manipulative dispositions. Contrary to what was predicted, there were no significant differences between care work and non-care workers samples on Societal and Economic Equality (U = 1.578, p = .058), Trust in Human Nature (U = 1.592, p = .052), Modesty (U = .180, p = .429), Cognitive Empathy (U = -.451, p = .327), and Inequality between People (U = -.486, p = .314).

Spearman's rho correlation coefficients were used to examine any significant correlations between the nine dispositional subscales, in particular associations between dispositional predicators that were significantly different between the care work and non-care worker samples: Emotional Empathy, Socially Desirable Responding, Hardheadedness and Manipulative subscales (N=197). Table 6.6 below displays the correlation coefficients between the nine dispositional predictors.

Emotional Empathy had small significant positive associations with Socially Desirable Responding, Trust in Human Nature, Modesty and Societal and Economic Equality. A medium strength significant positive association was also held with Cognitive Empathy. Hardheadedness and Manipulative subscales had small negative associations with Emotional Empathy.

Scores on Socially Desirable Responding had small significant positive associations with the Trust in Human Nature, Emotional and Cognitive Empathy subscales. Hardheadedness held a small significant negative association with Socially Desirable Responding, and a medium strength positive association with the Manipulative subscale.

In addition to the small strength significant relationships noted above, scores on Hardheadedness were significantly positively correlated with Inequality between People and Manipulative subscales, and significantly negatively correlated with Trust in Human Nature.

Manipulative scores held a further significant medium strength positive correlation with Inequality between People, and significant but small negative correlations with Trust in Human Nature and Societal and Economic Equality. A medium strength negative correlation was also held between Manipulative Scores and Modesty scores.

These findings intimated positive associations between the prosocial related subscales, and positive associations between the self-interest related subscales, with negative associations noted between the prosocial and self-interest sets of subscales.

Table 6.6. Correlation coefficients between the nine dispositional predictors

Dispositional subscale	Inequality between People	Societal and Economic Equality	Trust in Human Nature	Emotional Empathy	Cognitive Empathy	Modesty	Hard-headedness	Manipulative
Inequality between People	-							
Societal & Economic Equality	-.281**	-						
Trust in Human Nature	-.136*	.161*	-					
Emotional Empathy	-.071	.257**	-.216**	-				
Cognitive Empathy	-.122*	.202**	.195**	.363**	-			
Modesty	-.266**	.112	.038	.187**	.002	-		
Hardheadedness	.187**	-.028	-.159*	-.134*	-.098	.055	-	
Manipulative	.360**	-.165*	-.181**	-.271**	-.028	-.362**	.256**	-
Socially Desirable Responding	.035	.103	.134*	.209**	.225**	.103	-.217**	-.334**

*Significant at the $p < .05$ level (1-tailed)

**Significant at the $p < .01$ level (1-tailed).

Social Value Orientation (SVO) Predictor

Cross-tabulations of frequencies and percentages were calculated in the previous section and displayed in Table 6.4 for the non-care worker and care worker samples, by the three categorisation of SVO: Prosocial, Individualistic and Competitive. A greater proportion of the care worker sample had a Prosocial SVO in comparison to the non-care worker sample. In turn, the non-care worker sample had a greater proportion of participants with an Individualist or Competitive SVO. Notably, the care worker sample had no participants with a Competitive SVO.

In order to assess the prediction that care workers were more likely than non-care workers to have a Prosocial SVO, a 2 x 2 contingency table for participation in care work by Prosocial SVO was produced and analysed using Fisher's exact test in order to compare observed frequencies by those expected by chance. Table 6.7 displays both the observed and the expected frequencies for participation in care work by the Prosocial SVO dummy variable, Individualist or Competitive SVO (0) verses Prosocial SVO (1).

Table 6.7. Observed and expected frequencies for participation in care work by Prosocial SVO

Prosocial SVO	Observed frequencies for participation in care work (expected frequencies)	
	% of Non-care workers (n=93)	% of Care workers (n=87)
Non-prosocial SVO	30 (22)	13 (21)
Prosocial SVO	63 (71)	74 (66)

As predicted, participation in care work was associated with a lower than expected Individualistic or Competitive SVO, and a higher than expected prosocial SVO, in comparison to the non-care workers (= 7.41, p = .005) Cramer's V = .203, indicating a small effect size for the association between Prosocial SVO and participation in care work.

Summary of Bivariate Comparisons and Correlations between Predicators

In this section, significant associations with participation in care work were identified for multivariate analysis. Of the demographic and situational predictors being female, being older and having children held significant associations with participation in care work. Contrary to what was predicted, there were no significant associations with being born and educated outside of the UK and having other care responsibilities, in comparison to a sample of similar socioeconomic status and educational attainment.

Furthermore, of the nine dispositional subscales, predictions were made for care workers scoring lower on Inequality between People, Hardheadedness and Manipulative subscales; and higher on Socially Desirable Responding, Trust in Human Nature, Cognitive Empathy – Perspective Taking, Emotional Empathy – Concern for Others, Modesty, and Societal and Economic Equality. Of the nine dispositional subscales, participation in care work was only significantly associated with higher self-reported Emotional Empathy, higher self-reported Socially Desirable Responding, lower self-reported Hardheadedness, and lower self-reported Manipulative behaviours. The prediction of a preference for prosocial outcomes amongst the care workers also was supported. Prosocial SVO, over Individualistic or Competitive SVO, was significantly associated with participation in care work.

Prior to multivariate analysis, two-tailed Spearman's rho, Cramer's V for nominal by nominal predictors, and Eta for nominal by interval predictors were used to inspect for any high correlations between predictor variables that might indicate potential issues with multicollinearity. The following section examines collinearity more extensively, but examination of the bivariate correlations was used as a first step to detecting multicollinearity between predictors. As can be seen in Table 6.8 below of the correlation coefficients between predictors, the only large correlation coefficient was between age and having children, which were positively associated with a coefficient above .5. One would expect older participants in both samples to have children, but with medium strength associations noted between other predictors, collinearity diagnostics were required prior to any multivariate analysis. Age and having children also held significant correlations with Hardheadedness and Socially Desirable Responding.

Table 6.8. Correlation coefficients between predictors

Predictor Variable	Female	Have Children	Age	Prosocial SVO	Emotional Empathy	Hard-headedness	Manipulative
Female	-						
Have Children	-.064	-					
Age	-.179**	.541**	-				
Prosocial SVO	.073	.050	-.048	-			
Emotional Empathy	.120	.145*	.054	.160*	-		
Hardheadedness	.002	-.272**	.272**	-.015	-.134	-	
Manipulative	-.207**	-.091	-.091	-.203**	-.271**	.256**	-
Socially Desirable Responding	.120	.329**	.379**	.109	.209**	-.217**	-.334**

*Significant at the .05 level (2-tailed)

**Significant at the .01 level (2-tailed)

6.3.4. Multivariate Logistic Regression

As reported in the previous section, not all of the predictors held significant associations and reasonable effect sizes with participation in care work. Eight of the predictor variables were found to be significantly associated with care work: being female, being older, having children, higher Emotional Empathy, higher Socially Desirable Responding, lower self-reported Hardheadedness, lower self-reported Manipulative behaviours, as well as Prosocial SVO. In this section, the listed predictors were included into a binary multivariate logistic regression analysis to assess for their relative importance in the probability of participation in care work occurring.

Checking Data and Preparation for Analysis

Prior to the multivariate logistic regression analysis, continuous predictor variables were checked for outliers, skewness and kurtosis. Only age presented a potential problem, as reported in the previous bivariate analysis section, age was right skewed with approximately half of the participants aged between 20 and 30 years old (age range 18 – 71) . Although normally distributed predictor variables are not an explicit assumption of logistic regression, solutions in multivariate analysis tend to be more stable when predictors are normally distributed (Garson, 2010)[5]. For this reason, age was transformed prior to inclusion into the logistic regression model with an inverse normal transformation, which normalises right skewed data. Blom's transformation (Blom, 1958) was applied to normalise age, by replacing age with the rank approximation to the exact order of a normal distribution: $\Phi^{-1}\left[(r_i - 3/8) / (n + 1/4)\right]$ where Φ^{-1} is the inverse normal cumulative distribution function, r_i is the ordinary rank of the i^{th} case among all observations, and n is the number of non-missing observations. This transformation had been used and supported in previous psychological research, for recent examples see Von Känel et al. (2007) and Delisle et al. (2009). Descriptive statistics for the original data and transformed data for age can be found in Table 6.9 below. Note that the correlation coefficient with participation with care work outcome variable is maintained after transformation.

[5] The multivariate logistic regression model ran with and without normalisation for age. The age predictor became unstable in the model without the transformation and was consequently removed from the model in the first step.

Table 6.9. Statistics for the age predictor before and after transformation

Statistic	Age (observed)	NAge (normalised)
Mean	31.99	.002
Std. deviation	11.27	.030
Skewness	1.26	.988
Std. error (skewness)	.169	.169
Kurtosis	1.11	-.172
Std. error (kurtosis)	.337	.337
Correlation with outcome variable (r_s)	.181	.181

Suitability of the sample size was also checked, as maximum likelihood estimation in logistic regression relies on large sample asymptotic normality, meaning that reliability of estimates can decline when predictor variable combinations are represented by only a limited number of cases (Garson, 2010). One convention recommended to ensure a suitable sample size is to inspect the smaller of the two outcome variable groups and to ensure that this has a minimum of 10 cases for each predictor in the model (Peduzzi et al., 1996). With eight predictors, there should be a minimum of 80 cases for the smaller of the binary outcomes. After listwise deletion of missing data, the non-care worker outcome had a valid n = 93, the care worker outcome had a valid n = 86. The care worker group was the smaller of the two, with an n > 80 indicating a suitable sample size for logistic regression analysis.

Sampling adequacy was also checked at the descriptive and bivariate levels of analysis with cross-tabulations and chi-square tests to ensure cell frequencies for nominal predictors were > 5. Garson (2010) suggested collapsing categories within predictors to compensate for small samples. For this reason, the Social Value Orientation (SVO) nominal variable (see Appendix 19) was replaced with the dummy predictor variable Prosocial SVO; where Competitive SVO and Individualist SVO were combined to form the baseline (0) and Prosocial SVO formed the reference category of interest (1). This dichotomous dummy variable was partly created for ease of interpretation, but also

because there were no cases in the care worker sample with a Competitive SVO, limiting the opportunity for predictor variable combinations.

Having children and being female were the only other nominal predictor variables entered into the logistic regression analysis. These variables did not require dummy variable coding as they were already dichotomous. For having children, the no children category was the baseline (0) and having children was the reference category of interest (1). Similarly for the being female predictor variable, male was the baseline category (0) and female was the reference category.

Checking Assumptions Prior to Analysis

Certain assumptions needed to be checked prior to analysis in addition to the data checks. Linearity was required between continuous predictors and the logit of the outcome variable. The assumption of linearity was assessed by examining interactions between continuous predictors and the log transformations of these predictors (Hosmer & Lemeshow, 1989, as cited in Field, 2009). If the interactions were statistically significant, the assumption of linearity would be violated. Interactions were calculated for: Emotional Empathy, Socially Desirable Responding, Hardheadedness, and Manipulative subscale scores. Normalised age was not included as this was ranked, and contained values below zero for which the log cannot be calculated. All interactions were non-significant ($p > .05$), substantiating the assumption of linearity between continuous predictors and the logit of the outcome variable. Independence of errors was also required prior to regression analysis; this assumption was met as cases were unrelated to one another.

Finally, multicollinearity was assessed using tolerance and Variance Inflation Factor (VIF) diagnostic statistical tests. Following the guidelines suggested by Field (2009), if the largest value for VIF is greater than 10, this indicates a cause for concern with regards to collinearity. Tolerance values below .2 also indicate potential issues with collinearity between predictors. All VIF values were between 1.08 and 1.60 for the predictors, less than 10, and tolerance values were all above .2, between .63 and .92, indicating insufficient concern for multicollinearity between predictor variables.

Examination of the eigenvalues from the collinearity diagnostics indicate the amount of variance in the regression coefficient associated with each dimension. Variances were checked to identify collinearity between specific predictors, which tolerance and VIF does not detect. In particular the amount of variance in the regression coefficients for age and having children was inspected based on the previously noted high correlation coefficient between these predictors. To identify collinearity, high proportions of coefficient variances should load onto the same small eigenvalue, indicating coefficients are dependent (Field, 2009). The age and having children predictors both held reasonably high loadings on dimension three; however the eigenvalue was sufficiently large enough to diminish the concern for dependency in the variance of regression coefficients. For full collinearity diagnostics, including tolerance and VIF, see Appendix 20.

Logistic Regression - Backward Likelihood Ratio

After data preparation and assumption checks, the eight predictor variables: being female, age (normalised), having children, Emotional Empathy, Socially Desirable Responding, Hardheadedness, Manipulative, and Prosocial SVO were entered into a Backward LR logistic regression analysis with participation in care work as the outcome variable.

The predictors that were significant in the final step (step 5) are given in Table 6.10. Being female, Prosocial SVO, normalised age and Hardheadedness remained significant independent predictors in the final step of the model. Conversely, having children, Emotional Empathy, Socially Desirable Responding and Manipulative predictors were all eliminated from the final model. Statistics for each step within the regression analysis are located in Appendix 21a. A detailed description of the statistical findings follows Table 6.10 below.

Table 6.10. Variables significant in predicting the probability of participation in care work occurring

Predictor Variable	*B* coefficient	Standard Error	Wald	degrees of freedom	Significance Level	Odds Ratio Exp(B)	95% Confidence Intervals For Exp (B)
Being Female	1.485	.507	8.578	1	.003	4.416	1.634 – 11.930
Prosocial SVO	1.098	.403	7.403	1	.007	2.998	1.359 – 6.611
Age (normalised)	.378	.178	4.522	1	.033	1.460	1.030 – 2.068
Hardheadedness	-.119	.049	5.812	1	.016	.888	.806 – .978
Constant	-.482	.886	.886	1	.587	.618	_

Outcome variable: Participation in Care Work, -2LL = 218.691, Cox & Snell R^2 = .150, Nagelkerke R^2 = .201

The overall fit of the model with Being female, Prosocial SVO, age (normalised) and Hardheadedness included, was assessed by comparing the -2LL from this model with the -2LL of the constant alone. The -2LL was the log likelihood multiplied by -2 to make it a positive value and to ease interpretation of significance by converting it into a distribution similar to chi-square (Miles & Shevlin, 2001). This allows comparisons to be made with chance alone, but also the lower the -2LL value is, the better the model fit (Field, 2009).

Compared to the constant alone (-2LL = 247.873), including these four predictors in the model lowered -2LL to 218.691, indicating a better fit at predicting participation in care work. A chi-square statistic was calculated to assess for significance of model fit, by taking the -2LL for the constant alone, minus the -2LL for the model with the four predictors included. This was significant (χ^2 (4) = 29.182, p <.001) suggesting the model was significantly better at predicting participation in care work, than if the predictors were not included in the model. Previous steps in the model were also significantly better than the constant alone at predicting participation in care work, lowering the -2LL to 213.655 (see Appendix 21a for values at each step).

Two estimates similar to R^2, but not entirely equivalent to R^2, indicated the amount of variance in the outcome variable account for by the predictors (Garson, 2010). These were Cox & Snell R^2 and Nagelkerke R^2, the latter is a modification of the former with values that fall between zero and one for ease of interpretation. For this reason, Nagelkerke R^2 was chosen to estimate the amount of variance accounted for in the final model, which was 20 percent (R^2_N = .201).

In terms of the predictors included in the final model, individual coefficients were calculated (*b* coefficients in Table 6.10). Coefficients represent changes in the logit of the outcome variable as associated with a unit change in the individual predictor variables (Field, 2009). The Wald statistic, which also has a chi-square distribution, indicated whether the *b* coefficient for the predictor was making a significant contribution to predicting participation in care work, in comparison to zero. As previously predicted and noted in Table 6.10, being female, having a prosocial SVO, being older and scoring lower on hardheadedness significantly independently

contributed to participation in care work. However, having children, high emotional empathy, higher socially desirable responding and low manipulative scores were not significantly independently contributing to participation in care work and were removed from the final model (see Appendix 21a). Removing the predictor having children in step 3 increased the predictive significance of age in subsequent steps. Emotional empathy, socially desirable responding and manipulative predictors entered step 1 with relatively low *b* coefficients, leading to elimination from the final model.

The Wald statistic can present an issue when used with large *b* coefficients, which can inflate estimated standard errors, and result in a Wald statistic that is underestimated (Menard, 2001). As the *b* coefficients for predictor variables are relatively small in this model and the Wald statistic has produced statistically significant results, it was unlikely that Type II errors have occurred here.

More suitable than the Wald statistics in assessing the relative importance of predictor variables to the outcome variable was the odds ratio, noted as Exp(B) in Table 6.10, with 95% confidence intervals. The odds ratios are effect size measures assessing the relative strength of predictors in changing the odds of the outcome variable (participation in care work) occurring.

The odds of a female being a care worker was 4.12 higher than of a male being a care worker. Likewise, the odds of being a care worker with prosocial social value orientation are 3.00 higher than of them being an individual with an individualist or competitive social value orientation. An increase in age indicated an increase in the odds of participation in care work in this model, whereas a decrease in the odds of participating in care work was associated with higher hardheadedness scores. The confidence intervals for these odds ratios did not cross one, indicating confidence in the direction of the noted associations with participation in care work.

In summary, being female, being relatively older in age, and those with a prosocial social value orientation and less hard-headed attitudes and behaviours were more likely to participate in care work.

Being female appeared to be a strong predictor of participation in care work, but with only nine males in the care worker sample and over twice as many in the non-care worker sample, the reliability of estimates can decline when predictor variable combinations are represented by only a limited number of cases (Garson, 2010). For this reason, the logistic regression analysis was run again with sex-matched samples for females only in the care worker (valid n=79) and non-care worker (valid n = 71) outcome groups. Sample sizes were considered suitable for logistic regression analysis, as these fell in accordance with the recommendation for the smaller of the two outcome variable groups containing a minimum of 10 cases for each of the seven predictors in the model (Peduzzi et al., 1996).

After data preparation and assumption checks, the seven predictor variables: normalised age, having children, Emotional Empathy, Socially Desirable Responding, Hardheadedness, Manipulative, and Prosocial SVO were entered into a Backward LR logistic regression analysis with participation in care work as the outcome variable.

The predictors that were in the final step (step 4) are given in Table 6.11. Prosocial SVO, age (normalised), Manipulative and Hardheadedness remained in the final step of the model as independent predictors of participation in care work; whereas having children, Emotional Empathy and Socially Desirable Responding were all eliminated from the final model. Statistics for all steps within the regression analysis are located in Appendix 21b. A detailed description of the statistical findings follows Table 6.11 below.

Table 6.11. Variables significant in predicting the probability of participation in care work occurring (matched for females only)

Predictor Variable	*B* coefficient	Standard Error	Wald	degrees of freedom	Significance Level	Odds Ratio Exp(B)	95% Confidence Intervals For Exp (B)
Prosocial SVO	.857	.434	3.716	1	.054	2.310	.986 – 5.413
Age (normalised)	.455	.192	5.596	1	.018	1.575	1.081 – 2.297
Manipulative	-.101	.062	2.665	1	.103	.904	.800 – 1.020
Hardheadedness	-.112	.054	4.325	1	.038	.894	.804 – .994
Constant	1.951	.921	4.485	1	.034	7.034	_

Outcome variable: Participation in Care Work, -2LL = 185.591, Cox & Snell R^2 = .136, Nagelkerke R^2 = .181

The overall fit of the model with Prosocial SVO, age (normalised), Manipulative and Hardheadedness assessed in comparison with the constant alone (-2LL = 207.517), lowered -2LL to 185.591, indicated a better fit at predicting participation in care work. The chi-square statistic was calculated to assess for significance of model fit. The -2LL for the constant alone, minus the -2LL for the model with the four predictors included, indicated the model was significantly better (χ^2 (4) = 21.926, p <.001) at predicting participating in care work than if the predictors were not included in the model. Previous steps in the model were also significantly better than the constant alone at predicting participation in care work, lowering the -2LL to 183.554 (see Appendix 21b). The amount of variance accounted for in the outcome by the predictors in this model was approximately 18 percent (R^2_N = .181).

In terms of the predictors included in the final model, individual coefficients were calculated (*b* coefficients in Table 21b). Coefficients represented changes in the logit of the outcome variable as associated with a unit change in the individual predictor variables (Field, 2009). The Wald statistic indicated whether the *b* coefficient for the predictor was making a significant contribution to predicting participation in care work, in comparison to zero. In the previous regression model (Table 6.10) including males, having a prosocial SVO, being older and scoring lower on hardheadedness significantly independently contributed to participation in care work. In this model, with males excluded from the samples, being older and scoring lower on hardheadedness remained significant. However, prosocial social value orientation became non-significant in this model, reaching near significance (p = .054), as did scoring low on the manipulative subscale, which was excluded from the previous model.

Having children, high emotional empathy and high socially desirable responding did not significantly independently contribute to participation in care work, as was the case in the previous model, and were removed from the final model (see Appendix 21b). As in the previous model, removing the predictor having children in step 3 increased the predictive significance of age in subsequent steps.

The odds ratios assessed the relative strength of predictors in changing the odds of participation in care work variable occurring. The odds of being a care worker were

2.31 times higher for those with a prosocial social value orientation than for those with an individualistic or competitive social value orientation. Likewise, an increase in age indicated an increase in the odds of participation in care work in this model, whereas a decrease in the odds of participating in care work was associated with higher hardheadedness and manipulative scores. The 95% confidence intervals of the odds ratios for prosocial social value orientation and manipulative scores did cross one, indicating a lack of confidence in the direction of the noted associations with participation in care work.

In summary, amongst the female participants, being relativity older, and those who were less hard-headed were more likely to be care workers. Furthermore, these predictors were independently associated with care work participation. Prosocial social value orientation could not be significantly associated with females in care work, in comparison to females in other non-care occupations. However, there does appear to be a trend towards an association between prosocial social value orientation and participation in care work in the female-matched samples.

6.4. Discussion

The main aims of this chapter were to identify the individual differences and preferences associated with participation in care work, with the underlying assumption that care workers are adopting a mutually cooperative social strategy. This assumption of a mutually cooperative social strategy was based on the proposition set out in this thesis that the care worker and service user relationship is at least a cooperative exchange of money for care, but more likely an exchange with additional social benefits. The literature reviewed in Chapter 2 and the qualitative findings from Chapter 4 also suggested that care workers gain more from these occupational interactions than the relatively poor pay.

The prediction that care workers in this study would more likely be born and educated outside of the UK, religious, have children and other care responsibilities, in comparison to a sample of similar socioeconomic status and educational attainment, were not supported at the multivariate analysis level. Whilst having children was associated with participation in care work at the bivariate level, it was unclear whether this finding was

a product of the indirect strong association between being older and having children, or a direct association between having children and participation in care work. The collinearity diagnostics and logistic regression would suggest the former, with age being the stronger predictor for care work and mediating the association between having children and participation in care work. To clarify this association, an age-matched logistic regression for the care worker and non-care worker samples could be run, but matching the samples retrospectively by age was not possible for the participants within this sample. Doing so would have reduced the sample size considerably and would have created an inadequate sample for regression analysis.

The lack of evidence for a greater proportion of migrant workers in this study counters the prediction that care workers would more likely be born and educated outside of the UK. It is possible that the small and non-random sample in this study may have hindered a truly representative sample completing the questionnaire. Also, the unavailability of the questionnaire in other languages may have prohibited migrants with limited English language skills from completing the questionnaire, regardless of occupation. Compared with previous national demographic data, where a larger proportion of migrant workers were reported in the care sector (Cangiano et al., 2009; ONS, 2006), this study was localised to a very small proportion of care workers, mainly from London and Essex in England. The proportion of first generation immigrants working in care work appeared higher than the national average, but it should be noted that there is some regional variation, with a higher proportion of migrant workers in London and other urban areas (ONS, 2006). Both the care worker and non-care worker sample appear to have a high proportion of non-UK born workers. This may be the consequence of the majority of respondents living and working in the Greater London area, which could have slanted the samples away from the national picture.

Although most of the demographic factors were not associated with care work, two of the predicted demographic factors were associated with participation in care work at the bivariate and multivariate analysis levels. These were being older and being female. The greater proportion of females in care work in this study supports this and previous findings (Hussein, 2009; Skills for Care, 2012), as does the demographic data that suggests a steady trend towards care workers being older on average than the employed adult population (Hussein, 2009). However, it should be acknowledged that the mean

age (34) and standard deviation (11) in the care worker sample was slightly lower than the national average for care workers, which was 40 with a standard deviation of 12 (Hussein 2009). As has been noted in the findings section of this chapter, the sample within that study was right skewed somewhat. The methodological issue of a small non-random sample may have skewed the age distribution within this study, which lacks the high proportion of 'third age' workers (those aged 50 or older) constituting approximately 40 percent of the care workforce, as reported in recent national datasets (Hussein, 2010).

Previous research suggests that, in interaction with other factors, females may gain more from the social relationships formed in occupational choices than males do (Browne, 2004). For example, research on motives for choosing a medical specialism has linked sex to personality and personal situational factors (Buddeberg-Fisher et al., 2003). Females with a preference for areas of medicine with intensive patient contact tended to score higher on helpfulness, relationship consciousness and family responsibility. A commitment to investing in harmonious social relationships offers greater fitness gains for females than for males (Hrdy, 2009), an association supported by a greater female preference to attend to and empathise with others at work more generally (Browne, 2004). Findings from experimental games also indicated a greater female preference for investment in social alliances. Females tended to be more socially orientated and egalitarian in comparison to males (Andreoni & Vesterlund, 2001; Dufwenberg & Muren, 2006; Eckel & Grossman, 2008), and are more likely to adjust economic decisions to situational factors in order to protect relationships between group members (Eckel & Grossman, 1996).

This general female preference for social and equitable relationships with others would support a preference for care work, where sensitivity to situational cues and responding accordingly form an essential element of the work (see Chapter 4 for descriptive examples of *adaptability* in care work). A preference for establishing relationships with others and upholding these relationships are characteristic of the close relationships that can form in care work (Ball et al., 2009; Challis & Davis, 1986; Himmelweit, 1999; Ryan et al., 2004; Stone, 2000), and further explicates the over representation of females in the occupation.

As for age, if older care workers offer and gain a different experience from the care relationships in the work, this would explain why over half of care workers usually do not start working in adult social care until they are over the age of 30 (Eborall & Griffiths, 2008). Differences in motivations may account for older individuals being drawn to care work (Chervier, et al., 1994; Rawlins & Houska, 1986; Roessler, et al., 1999). Also, as previously suggested, those who choose to engage in care work at an older age could be facing a phase of investment in child-rearing or care for elderly relatives, where the flexible hours and care capabilities could be suited to paid care work. Age has previously been reported as a predictor of job satisfaction in home care workers in the US (Feldman, 1997), with older care workers considered as more skilled at performing the care tasks (Butler, 2009). It has been suggested that older care workers provide the experience of caring for others, dependability, courtesy, honesty and kindness. All of which complement the requirements made by service users from the care relationship (Rix, 2001). If care relationships become more mutually beneficial with age, in terms of a mutual commitment to engage in the care relationship, emotional and social resource benefits may ensue as a consequence.

For the nine dispositional subscales, predictions were made that care workers would score lower on the Inequality between People, Hardheadedness and Manipulative subscales; and higher on Socially Desirable Responding, Trust in Human Nature, Cognitive Empathy – Perspective Taking, Emotional Empathy – Concern for Others, Modesty, and Societal and Economic Equality. At the descriptive level, the direction of these associations with participation in care work were supported, with the exception of Cognitive Empathy which showed no descriptive difference between means for the care worker and non-care worker samples. At the bivariate level, only higher Emotional Empathy, higher self-reported Socially Desirable Responding, lower self-reported Hardheadedness, and lower self-reported Manipulative behaviours were associated with participation in care work. At the multivariate level, only hardheadedness held a significant independent association with participation in care work, even with the female-matched regression analysis. This suggests a clear association between a lack of hardheadedness and participation in care work.

As previously stated, this thesis argues that the preference for care work, over other equally viable occupations, is capturing individual preferences for forming social

alliances. For these cooperative interactions to occur, certain proximate psychological mechanisms are required to enable this care investment in others. The lack of significance for associations between the dispositional predictors and participation in care work of measures at the bivariate level, and particularly the multivariate level, may suggest that certain dispositions are more discriminative of participation in care work over others. The subscales that captured the opposite of agreeableness, self-reported Manipulative behaviours and Hardheadedness, related negatively to care work. The lack of these behaviours was associated with engagement in care work. This indicates that care workers scoring lower on hardheadedness items (see Appendix 15a) avoid conflict, and are more compliant and yielding in their encounters with others. Likewise, the negative association with Manipulative behaviours suggests a limited desire to manipulate others for personal gain, especially among female care workers over female non-care workers.

These two subscales reflected the reverse of agreeableness; scoring high on these would be indicative of dispositions unsuitable to care work. The benefits of possessing high levels of agreeableness include harmonious social relationships, the advantages brought from good social support networks, and the ability to forgive and appease antagonistic situations (Nettle, 2006, 2007a). To access the mutually beneficial aspects of the relationships in care work (Ayalon, 2009; Doyle and Timonen, 2009; Himmelweit, 1999; McClimont and Grove, 2004), psychological mechanisms that promote cooperative relationships, such as a lack of hardheadedness, should be explicit in those seeking to form lasting social alliances with others.

Higher scores on the Emotional Empathy subscale, but not on Cognitive Empathy, appeared to differentiate care workers from non-care workers at the bivariate level. Empathy has previously been discussed as the particular psychological mechanism directed to trigger the benefits of cooperation by motivating the provision of help to others (de Waal, 2008; Kenrick, 1991; Preston & de Waal, 2002). However, some have differentiated between the purposes of the perspective-taking, 'mind-reading' aspects of cognitive empathy, and the affective concern aspects of emotional empathy (Davis, 1983a, 1983b, Hoffman, 1981; Nichols, 2001). Empathy as a motivator to help others has been regarded as a reactive emotional concern mechanism, with at least a minimal capacity for the cognitive aspects of empathy (Nichols, 2001). It is the feeling of

concern that induces the cooperative behaviour (Batson & Moran, 1999), and this might explain why emotional empathy with its associated reactive emotional response is higher in those in an occupation that cares for others in a physical and responsive way. In the qualitative findings from Chapter 4, and reported elsewhere (Ball et al., 2009; Piercy, 2000), it is the feelings of rewards and the emotional investment that provides a strong motivator to care for others in a committed and long-term way (Challis & Davis, 1986; Himmelweit, 1999). The cognitive empathy allows for empathic perceptive-taking, which is necessary for targeting the help, taking into account the particular aspects of the situation and adjusting helping behaviour accordingly (De Waal, 1996).

The prediction that a prosocial preference was associated with participation in care work, as assessed by Social Value Orientation (McClintock, 1978; Messick & McClintock, 1968; Van Lange et al., 1997), was supported at the bivariate and multivariate levels. This relationship between prosocial preferences and helping others supports previous findings in other domains of charitable giving and assistance to other (Bekkers, 2006; McClintock & Allison, 1989; Van Lange et al., 2007). Those engaging and remaining in care work preferred prosocial outcomes, supporting a general tendency towards mutualistic gains over individualistic or competitive ones. The association between prosocial social value orientation and participation in care at the multivariate level changed to near significance when samples were sex-matched for females only. However, this finding could be partially explained by a loss of statistical power brought about by a reduction in sample size.

This relationship between prosocial preferences (as assessed by SVO) and care work has particular importance for this thesis. Not only does it support a care worker preference for mutually beneficial gains in an economic context, it also supports the idea that care workers are more likely to forego personal financial gain to attain these equitable outcomes. Mutual benefit and the cost of a lower wage defines the position taken in this thesis; of care work being the motivation to care *for* someone in a practical sense, the consequence of caring *about* someone in an emotion sense, and the willingness to do this for a relatively low wage. Value is placed on the gains from investing in social alliances, over the material gains from financial rewards in higher pay.

In addition to providing some evidence to support the predictions set out in the thesis, this study has also contributed two novel findings. The first is to establish a greater preference for prosocial outcomes amongst care workers in an abstract context, as demonstrated by the social value orientation task. The second is to have differentiated female care workers from female non-care workers at a similar socioeconomic level by their lack of the desire to manipulate others for personal gain. This wider preference for prosocial interactions has not been previously evidenced in the literature on care work.

The study presented in this chapter was not without its methodological limitations, and these should be taken into consideration when interpreting the findings from this study. First, the occupational heterogeneity of the non-care worker comparator group relative to the occupational specificity of the care worker group, might have accounted for the greater variance in the non-care worker sample on the nine dispositional subscales. Using a more distinct occupational reference group to compare and make predictions against might have altered associations between the nine dispositional subscales and participation in care work. The second methodological issue relating to the dispositional subscales was the lack of a confirmatory factor analysis to verify the factor structure underlying the nine dispositional subscales. Confirmation of the factor structure with a suitably large sample size would instil greater confidence in the subscales used in the study, further establishing suitability of use with a care worker population.

Taking into account these methodological limitations, the findings from this study suggest a preference for prosocial outcomes among care workers, similar demography in terms of being female and being older, and a self-reported avoidance of conflict and compliance as manifested in low Hardheadedness. These findings support a tendency towards a mutualist social strategy. However, this conclusion is by no means irrefutable, as the correlations were generally small and confidence intervals for the odds ratio for being female in the regression were fairly wide. Also, self-report measures are not a mirror for actual behaviour, but they do give a reliable indication of dispositions and preference. The implications of these findings in relation to theory, policy and practice, together with those in the previous studies, will be discussed in the following chapter. This will be accompanied by recommendations for further research and implications for the further care workforce.

7. Discussion

This final discussion chapter will evaluate the extent to which the central aim of the thesis was addressed. What follows is a summary of the main findings, and an evaluation of the novel theoretical reconceptualisation of care as a mutualistic social strategy. The mixed methodology used to empirically investigate this is appraised, with consideration given to: the limitations embedded within the methodologies used; potential approaches to address these; and avenues open to further validation and exploration. However, the chief purpose of this chapter will be to suggest recommendations for social care policy and practice. More specifically, it will suggest how the reconceptualising of care work as a mutualistic social strategy can be employed in a constructive manner to effectively recruit and retain suitable and committed staff.

7.1. Summary of the Main Findings – Addressing the Aims

The central aim of this thesis was to understand the factors that motivate individuals to engage and remain in paid health and social care giving from an evolutionary perspective, and the implications these have for recruitment and retention. This central aim was addressed in a sequential manner. The first stage was to establish what was known about care workers and their motivations. The subsequent inadequate availability of theoretical accounts led to the reconceptualising of care work from an evolutionary perspective; which hypothesised that mutually beneficial social gains underlie care work, and compensate for the poor pay and conditions (see Chapter 2). Second, this novel theoretical approach to understanding care work was explored further in care workers' accounts of their motivations and experiences leading to decisions to engage and remain in care work (Chapter 4). Motives for engagement in care work were recounted as: a propensity to care for others; a preference for the close relationships in care work; a tendency towards prosocial environments; and the practical need to earn money in this preferred environment. These themes provided supportive evidence for the hypothesised mutually beneficial social gains (see Chapter 2, Table 2.1 for summary) obtained by care workers from their engagement in care work.

Third, findings from the literature, and accounts from care workers themselves (Chapters 2 & 4), informed the development of a measure to assess for individual differences associated with participation in care work (Chapter 5). The developed subscales captured the main dispositional and prosocial preferences noted in the qualitative accounts, as well as the suggested psychological mechanisms selected for, to cultivate a mutually cooperative behavioural strategy (Axelrod & Hamilton, 1981; Trivers, 1971). Empathy, prosocial values and aspects of agreeableness all featured in the developed measure. The resulting subscales had suitable internal consistency and content validity for assessing these attributes among care workers.

Fourth, the measure was administered to care workers and occupational comparators of similar socioeconomic status to identify individual differences and preferences associated with participation in care work, with the underlying assumption that care workers were adopting a mutually cooperative social strategy. As reported in the findings from the previous Chapter, this study provided evidence of a preference for prosocial outcomes among care workers, similar demography in terms of being female and being older, and a self-reported compliance and avoidance of conflict, evidenced by low Hardheadedness (Chapter 6). These findings support the hypothesis that care workers tend towards a mutualistic social strategy. In particular, they demonstrated a preference for prosocial outcomes, which were assessed in economic terms, and manifested in a preference for sacrificing larger absolute or relative personal gains, in favour of more mutually beneficial outcomes.

The final step in addressing the central aim of this thesis is to consider the implications of these findings for social care policy, and the recruitment and retention of care workers. The latter part of this chapter is devoted to this purpose. Prior to this, the following sections will evaluate the novel application of evolutionary theory to paid care work.

7.2. Application of Evolutionary Theory to Paid Care Work

Application of an evolutionary approach to paid care giving provided a novel approach to address what is essentially an issue for social care policy. Most work has addressed paid care work from either a sociological or economic perspective the focus of which

has been on the negative aspects of the work, with a purported relationship between 'women's work' and emotional labour as the raison d'être for poor pay and conditions in care work (Claassen, 2011; Guy & Newman, 2004; Hochschild, 1983; Ehrenreich & Hochschild, 2003). Individual factors and motives for participation in care have largely been articulated from the perspective of concerns for poor pay (England, 2005) and the exploitation of emotional labour in care work (Guy & Newman, 2004; Ehrenreich & Hochschild, 2003). However, despite the poor recruitment and retention in the sector, engagement in paid care work persists with a proportion of individuals willing to engage in this behaviour and remain in it.

In reviewing the insights from the available literature in Chapter 2, it became apparent that a theory-driven approach was needed to understand the individual-level factors underlying motivations for engagement and continued participation in care work. A theory was needed that combined the motivation to care *for* someone in a practical sense, with the consequence of caring *about* someone in an emotional sense (Meagher, 2006), combined with the willingness to do this for a relatively low wage. In this thesis, an evolutionary approach was applied to explain both the care *for* and the care *about* processes, in a manner that has been disregarded from previous accounts; partly because in previous research they had focused on either the paid aspect, or the care aspect of the work alone.

From an evolutionary perspective, the capability to care *for*, and desire to care *about* are not exclusive to care work, they are embedded in behaviours outside of paid care work. To fully understand the causes of any behaviour, both the ultimate 'why' and the proximate 'how' need to be established in order to explain past events, predict future events, and to understand goal-directed phenomena (Mayr, 1961). This thesis attempted to provide an explanation of both, and these are addressed in the remainder of this section.

Ultimate causes relate to the evolutionary history and function of a particular feature in terms of its effect on the inclusive fitness of the individual. Mutualism enables costs to be offset through collaboration with others and is an evolutionary stable strategy for maximising fitness. Mutualistic cooperation entails certain prosocial characteristics which correspond well with those found in care workers. In this thesis, care work is

presented as a particular type of social ecology, one where mutualistic cooperators may thrive. This is in line with the previous literature, which suggests that care workers can gain more from the interactions with service users, than a simple occupational exchange of money for care (Ball et al., 2009; Hall & Wreford, 2007; Himmelweit, 1999; Leece, 2006; McClimont & Grove, 2004; Meagher, 2006; Ryan et al., 2004). Mutualist cooperators may thrive in care work because they form close alliances with service users that may offset the low wages and poor conditions. In a review of the association noted between social networks and improved health (Cohen & Janicki-Deverts, 2009), greater numbers, and more diverse social allies were associated with longevity, less cognitive decline, and better prognoses with limiting or life-threatening illnesses. Those with low socioeconomic status and resources may require the social networks to compensate for the fitness losses incurred from the poor pay and conditions in care work.

Tendencies toward mutualism are likely to vary between individuals, not least because mutualism may be a stable life-history strategy under some form of frequency dependent selection (Buss, 1996, 2009; Nettle, 2006) and care work will attract and retain individuals prone to mutualistic strategies. To this end, this thesis was primarily concerned with the proximate detail of relevant behaviours and several social, psychological and physiological mechanisms were suggested to enable care work as a mutually cooperative behaviour. Explicitly assessed were empathy, aspects of agreeableness and preferences for prosocial values, which may be more prevalent in certain demographic groups (e.g. Eckel & Grossman, 1996; Van Lange et al., 1997). Participation in care work was associated with aspects of agreeableness and preferences for prosocial outcomes in multivariate analysis, although emotional empathy remained significant at the bivariate level only (Chapter 6), a finding which is explored further in the following section. The preference for prosocial outcomes is particularly pertinent for the mutualistic strategy in paid care work. The social value orientation measure used was essentially a financial game that distinguishes proself preferences from prosocial preferences. This implies that care workers' propensity to engage in mutualist social strategies for equally beneficial outcomes goes beyond the context of care work; a finding that differentiated the care worker sample from the comparator group.

This assessment of characteristics also added to the understanding of why some individuals would be drawn into care work, and would potentially benefit from it, more than others. Individual motives for deciding to engage in care work are complex (see Chapter 4); but by viewing the central relationship in care work as a mutually beneficial cooperative alliance with the care recipient, predictions can be made about who would benefit most from these alliances in care work and why. A prosocial motivation amongst care workers may explain the higher proportion of females and older workers in care work (Hussein, 2009, 2010, 2011b; Skills for Care, 2007, 2012). Females tend to be more sensitive to situational and empathetic cues, and to adjust decisions based on these particular features in order to protect relations between group members and increase cooperation (Andreoni & Vesterlund, 2001; Batson & Moran, 1999; Eckel & Grossman, 1996; Dufwenberg & Muren, 2006).

In addition, prosocial behaviours appear to increase with age, suggesting a preference for more cooperative and equal outcomes with age (Van Lange et al., 1997). Both being older and being female were significantly associated with participation in care work at the multivariate level. Engagement in care work may have a more appealing payoff for older females in terms of fitness gains, than for their male or younger counterparts. As previously reviewed, females have more to gain from harmonious social alliances than males (Hrdy, 2009), and these filter into occupational preferences (Browne, 1998; 2004), but further research is required to fully assess the relative advantage of investing in social networks with service users, based on demography.

Another proximate mechanism that may support the association between participation in care work and being female, but was not assessed in this thesis, is the neuropeptide oxytocin. As reviewed in Chapter 2, this proximate neural mechanism for care giving behaviours and concern for others is found in higher concentrations in females than in males (Turner et al., 1999), and is important in pair bonding behaviours and prosocial interactions (Barberis & Tribollet, 1996; Baumgartner et al., 2008; Buijs & van Heerikhuize, 1982; Kendrick, 2004; Kosfeld et al., 2005; Zak, Kurzban & Matzner, 2005; Zak, Stanton & Ahmadi, 2007). The higher concentration of oxytocin in females could account in part for a greater tendency for females to engage in care work over males, at the proximate level. Oxytocin, empathy, aspects of agreeableness, and prosocial preferences offer an alternative to the view of women in care work as an

entirely socialised construct (Guy & Newham, 2004). However, further research is required on the circulating levels, reactivity, and responsivity of oxytocin, in care workers, compared to non-care workers in order to evidence this relationship. Experimental evidence in other social mammals has linked oxytocin to increased communal and cooperative behaviours, beyond direct kin (Bales et al., 2004; Madden & Clutton-Brock, 2010), which provides a good basis for testing this hypothesis for mutually cooperation between paid care workers and service users.

In summary, whilst further research is needed to fully explore the proposal that care work is a mutually beneficial social strategy, the application of evolutionary theory to this thesis offers an informative and viable explanatory approach to understanding engagement in care work. The ultimate and proximate causes that have been articulated to account for motivations to participate in paid care work compliment both the previous literature and findings from the thesis. It suggests that care workers' behaviour is driven by: (i) potential benefits from forming broader social networks and alliances, and (ii) by a predisposition to engage in prosocial behaviours. It accounts for the demographic representation of care workers, and provides an explanation of this economic behaviour that gives consideration to the experiences of care workers, culminating in a mutualist social strategy for those processing certain attributes and preferences.

Frank (2011) noted that preferences may differ in numerous dimensions, and these may all have real consequences on fitness benefits. The decision to participate in care work, over other occupations, is capturing individual preferences for forming social alliances, with attributes to care *for* and *about* others, and a willingness to tolerate a low wage. The value gained from forming social alliances at work may offset the lower wage. The unsociable hours and low pay in care work leaves little opportunity and resources for forming social alliances outside of work, and therefore, care work may compensate this with benefits through mutualistic alliances gained at work. Whether engaging in paid care work actually increases inclusive fitness still needs to be tested, but if care work attracts mutualistic cooperators this needs to be directed in the structure of the paid care work environment in order to effectively monopolise on this social strategy.

The Added Value of an Evolutionary Approach

There is value in applying an evolutionary approach to understanding paid care work. It provides a theoretical basis for understanding behaviour that goes beyond description, and has allowed for the formation and testing of predictions in an applied context. The individual and their environment are unified by understandings of fitness, and this provides the basis for generating these predictions. In this thesis, this approach has provided the basis for hypotheses as to why individuals would be motivated to participant in paid care work and what they could potentially gain from these encounters in fitness terms. This has resulted in focused predictions being made and tested about who care workers might be, and how they might extract benefits from their environment.

Clearly there is a large, almost infinite, set of alternative theories that could have been applied to account for the data presented within this thesis, and many of them would have overlapped in terms of the predictions they would have produced. In light of this situation, several decisions have been made by me about various philosophical commitments. The first is an ontological commitment to materialism. The second is an organisational commitment. As a reductionist, but not in a naive deterministic sense, I recognise that biological organisms are hierarchically organised in their structures and in the causes of their structures. This leads to a causal commitment. I prescribe to a complete causal explanation of behaviour that accounts for both proximate and ultimate causation. This further reflects a biological truth, that proximate functioning must follow in light of ultimate accounts. Taking this into account, my predications have been framed in terms of their relation to fitness considerations. Therefore, an evolutionary approach has clear heuristic value by virtue of its approximation to biological truths, which affords it the ability to derive hypotheses for further research.

It was not the intention of this thesis to test the viability of this theoretical framework, but instead to apply a theoretical approach with a sound body of scientific evidence behind it. The application of this heuristic is more likely to lead to grounded data and the development of better theory in the future. I acknowledge that it is possible to reach the same predictions and findings from an alternative theoretical approach. It is not the role of applied work to challenge this. Instead this thesis highlights that the overlap

with previous findings presents a different means for understanding care work, one which may lead to new hypotheses and the means for testing them. For example, the findings in this thesis provide support for a hypothesis of potential social network benefits gained from participation in care work. This needs to be tested explicitly. One could predict that the size and the nature of the social networks of care workers may change after engagement in care work in a beneficial manner, but this is the work for future research to test.

Avenues for future research are addressed further in section 7.5 of this chapter, but first, the following section provides practice and policy recommendations based on the reconceptualising of care workers as mutualistic social strategists. It considers how this understanding of their behavioural choice to engage and remain in care work might be employed in a constructive manner to effectively recruit and retain suitable and committed staff.

7.3. Implications for Social Care Practice and Policy

Reconceptualising care workers as mutualistic cooperators has implications for social care practice and policy. These will be tackled in this section at multiple levels. First, recommendations will be given on how the care environment and recruitment procedures could be altered at the care service provider level, in order to encourage mutualist cooperators into the sector and maintain them. Second, the implications this would have for current local authority commissioning procedure will be considered, with recommendations proposed for the necessary changes required to current commissioning arrangements. Finally, recommended changes will be outlined at the national policy level, in order to more effectively fund social care services and retain their services with an equitable wage.

A crucial first step in reducing turnover for service providers will be the targeted recruitment (as opposed to mass recruitment) of mutualistic social strategists into care work. Recruitment should be centred on individuals with dispositions and preferences associated with enjoyment and investment in mutually beneficial encounters that assimilate friendship. Retaining care workers will depend on fostering the relationships with service users and their families for mutual benefit; this may entail changing care

worker and service user dyads where they are not working. Explicitly promoting the prosocial aspects of the work in local advertising campaigns might attract those possessing such proclivities. In addition to this, the more practical aspects of the work, which also appear to appeal to care workers (Chapter 4) should be promoted, such as the flexible working hours, responsibility and independence experienced in carrying out the work. Essentially, it is the prosocial aspects that appeal to mutualistic cooperators, which differentiates them from other low paid service sector workers (Brown & McIntosh, 2003). In these sectors, social relations with co-workers and others are secondary to short-term rewards and career prospects, which are the key determinants of satisfaction at work. For care workers these preferences are reversed, with greater weight given to the prosocial aspects of the work.

National recruitment campaigns have been misguided in attempts to recruit from untapped labour markets. The findings from this thesis and previous accounts suggest a distinct demography amongst care workers (Hussein, 2009, 2010, 2011b; Skills for Care, 2007, 2012). Recommendations to recruit more men, school and college leavers to care services (Eborall & Garmeson, 2001) failed to consider why these populations were under-represented in the care sector in the first place. The nature of work will be more attractive to certain individuals over others, and these could well be along the lines suggested in this thesis. Although national recruitment campaigns attempted to showcase that social care workers found their work rewarding and satisfying (Department of Health, 2002), they perhaps should have targeted demographic groups more inclined to choose care work as a viable occupation choice in the first place, instead of mass marketing to those unlikely to consider care work as an option.

Localised recruitment strategies at the service provider level have the added advantage of attempting to match service user interests with care worker interests. If motivation for remaining in care work is dependent on a relationship of mutual benefit between the service user and the care worker, matching in a similar manner to 'befriending' and other volunteering schemes may encourage relationships of mutual benefit and a greater commitment to the care. Matching of this type could navigate the way for care relationships to extend beyond the practical need to care *for* service users, to a commitment to care *about* the service users.

In addition, matching paid care workers and service users could be done on a 'preference for mutualism' basis. Mutualistic cooperators will probably be more randomly dispersed among the service user population. As mutualism relies on both parties investing in the cooperative alliance, the recipient of the care relationship may not be interested in a mutualistic alliance, and this would reduce opportunities for additional social network benefits for a mutualistic care worker. In this case, pairing the service user with a care worker interested in the simple exchange of money for care would be the most appropriate situation for both parties, whereas a mutualistic care worker would lose out on the potential mutualistic benefits. They would be better placed with a service user interested in a more mutualistic arrangement. See Figure 7.1 below for a summary of the hypothesised relationships between paid care workers and service users, based on inclination toward mutualism and the impact this may have on retaining staff. The preference would be to employ care workers that cared *for* and *about* service users to unsure committed staff, the lack of care *about* aspect may result in the exchange of money for care, but without the commitment to care.

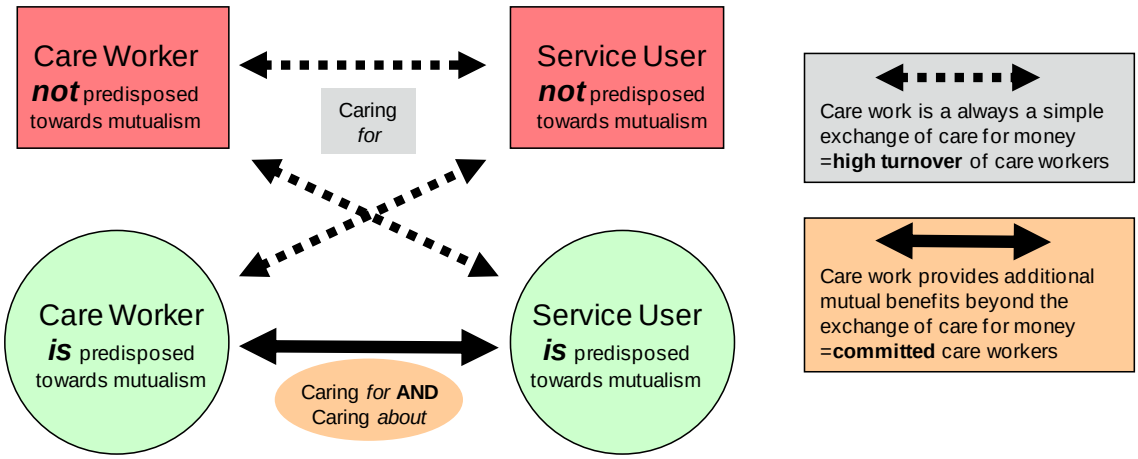

Figure 7.1. Hypothesised relationships between paid care workers and service users based on mutualism

Matching processes would require service level supervision of the relationship between service users and care workers, with both parties being given the opportunity to express their views of the care relationship, especially when these become fractious or challenging. Care coordinators and supervisory staff should provide support to care workers, and quickly move them on from care plans where relationships with service users are deteriorating in order to prevent burnout. Regular supportive supervision of

care workers would also enable them to cope with the more emotionally challenging and demanding aspects of the work, which can go unnoticed without careful monitoring. This may prevent staff leaving, if they receive support through the most difficult aspects of their work. This may be more acute for domiciliary care services where care workers often work independently.

Fundamental to ensuring that mutual benefits are received in care interactions with service users, is the time available to build these relationships with service users. The care environment needs to be one where sufficient time is given to engage in social interactions with service users. Current social care commissioning arrangements by local authorities are preventing the development of these mutually beneficial alliances, by restricting how and when care is received in England (Francis, 2012; Means et al., 2002; O'Brien & Francis, 2010).

In a recent report produced by the UK Home Care Association (Angel, 2012): 76 percent of the local authorities covered in the survey were reducing the number of visits a service user would receive from a care worker; in addition over 80 percent were reducing the quantity of care they would pay for; and most vitally 73% of care worker visits are being commissioned for 30 minutes or less for personal care. This reduction in time does not entail a reduction in the level of need for service users. In fact, care is now largely commissioned to those with only 'substantial' or 'critical' needs (Means et al., 2002; O'Brien & Francis, 2010). The trickle-down effect of this means that service users with lesser care needs will receive less time than this or nothing, and social care activities will be deficient or removed from all care plans (Angel, 2012).

A commissioning practice recommendation from the findings of this thesis would be to increase visit length to a suitable minimum length that avoids personal care tasks being rushed. This would also facilitate an environment for mutually beneficial relationships to thrive, through the provision of time for health and social care tasks. Rushed visits with service users are likely to impact on the recruitment and retention of care workers, but they will have a more profound effect on those in receipt of these care services. The two case studies from a recent care provider survey (Angel, 2011) below, demonstrate the impact of shorter visits and a reduction in visits for those in receipt of these services:

> "A lady in her 80s in East Anglia has Parkinson's disease. The 14 hours of care she received was halved in May 2011, by halving each of her half-hour homecare visits, despite her needs not having reduced. Parkinson's is associated with variable exacerbation where people may require more assistance than usual. The provider said "on bad days we have to rush. All four calls per day have been reduced to 15 minute visits, which includes delivery of personal care." (p. 11)
>
> "A lady in her 90s no longer receives the seven evening-time visits to help with personal care and check-up on her safety. Since the council in the South West of England reduced her care by 41% in January 2011, she has been scalded attempting to make a cup of tea; has spent a night lying on the floor undetected after a fall; and a skin condition has deteriorated as she is unable to apply the lotion she needs. She now regularly telephones her daughter in the evenings in a state of distress. This has saved the council £62 a week." (p. 11)

It is imperative to note that local authorities with social service commissioning responsibilities are faced with shortfalls in funding. Central to implementing the recommended changes above, are adequate funds to social care in order to prevent short visits and better conditions for care workers to establish mutually beneficial alliances with service users. Current commissioning arrangements can only improve with appropriate levels of funding and national policies to monitor local commissioning practices. Fifty-eight per cent of local authorities have cut prices paid to care service providers for home care (Angel, 2011). Funding cuts to social care services risks the possibility that these costs will be picked up elsewhere in the system. The lack of preventative social care may incur costs to other publicly funded services, with more hospital admissions and residential nursing placements needed for service users with rapidly deteriorating health, as a consequence. The care needed will then be beyond the remit of social care but with added costs to health and housing services instead.

National intervention is needed to remedy this. Revenue from national taxation systems may contribute in part to meeting the shortfall in this public good. However, additional contributions may also be required to address the shortfall brought about by the ageing population. Recommendations have been made elsewhere for a combination of private and public contributions to social care, with a cap on contributions over a lifetime (Commission on Funding of Care and Support, 2011). Any such recommendation requires a full economic anaylsis, which is outside the remit of this thesis.

Care workers are disproportionately susceptible to being underpaid, relative to National Minimum Wage (NMW). Low pay is likely to be a contributing factor to the poor recruitment and retention noted in care work. A policy recommendation would be to ensure that care workers should be paid at the NMW or above (Hussein, 2011a; Low Pay Commission, 2012). Findings from the Social Value Orientation task demonstrated (Chapter 6) that care workers value equal outcomes. Although motives for remaining in care work are not influenced heavily by payment, low wages do devalue the work and should be set to at least meet minimum wage requirements. Moreover, care workers are partly engaged in care work because they need the money to cover the cost of living. Values below the NMW jeopardise this, and are likely to result in individuals having to leave the sector to cover basic living costs.

Pay for care work at the current level would not encourage mutualist cooperators, or non-cooperators for that matter, to remain in an occupation that provided an unfair exchange of a substandard wage for labour. For mutualistic care workers, the low wage is more tolerable if it is offset by other benefits from relationships with service users, but factors such as the shorter 15 minute visits may essentially reduce the amount of time to build these mutualistic alliances. This would force the care worker-service user relationship into a care *for* only model of care, instead of a care *for* and care *about* model required for mutualism (see Figure 7.1). This would presumably lower the tolerance for substandard wages in scenarios where the time to invest and gain from mutualistic relationships is reduced. Unionising care workers would aid in the prevention of such infringements, and would galvanise these mutualistic cooperators to invest in and protect others within the union for mutual benefit.

Although not an exhaustive list of recommendations for policy and practice, these emphasise the implications that mutualistic alliances in care work have for recruiting and retaining committed and suitable care workers.

7.4. Methodological Issues

The mixed methodological approach used to investigate care worker motivations for engaging and remaining in care work was not without limitations, and these are now considered in relation to the research aims specified in Chapter 3.

(i) To explore motivations and other factors associated with engaging and remaining in care work

The semi-structured interviews with care workers provided the rich level of detail that was missing from the literature, and which was needed in order to explore care worker motivations and experiences, and produce a better understanding of the factors associated with engaging and remaining in care work. However, this methodology may be prone to sampling bias, with a small self-selecting sample of care workers likely to reflect the most committed and enthusiastic care workers, or those most dissatisfied with care work. Neither of these polarisations appeared to have occurred within this qualitative study. Although all of the five themes focused on the motivating and rewarding aspects of the work, care workers in the self-selected sample were willing to discuss the dissatisfying aspects of the work and unpleasant experiences. Many of these were captured in the subthemes *Commitment and Cost of Care,* and *Misconceptions and the Devaluation of Care Work*. The purpose of this study was to explore the motivating aspects of care work. Therefore, any bias towards expressing more positive views, over negative ones, would not necessarily be an issue in addressing the research aim, unless these positive views were overstated, but this seems unlikely given the range of responses, and similarity to previous findings (Ball et al., 2009; Piercy, 2000; Ryan, 2004).

A more tangible limitation concerning this interview study was the limited English language skills of some of the migrant care workers. This limited acquisition of the English language could have hindered their understanding of the questions being asked, or their ability to articulate their motivations using limited vocabulary. The responses from the migrant care workers with limited English tended to be shorter, but nonetheless, they were readily able to respond to questions and little clarification was needed. Coding quotes from these transcripts fitted the five themes, and appeared not to differ any more than the fluent English speakers. Although this methodology cannot claim to provide representative findings for all care workers as a whole, it has allowed for exploration of care worker motivations, with a larger and more diverse sample than in previous interview studies with care workers in the UK (McGregor, 2007; Ryan et al., 2004).

(ii) To develop a measure to assess for individual differences associated with participation in care work

Logical analysis and exploratory factor analytic techniques verified the nine dispositional subscales as having satisfactory levels of internal consistency and validity. Principal Components Analysis was suitable for the reduction of previously developed items into smaller coherent subsets, which was required in this scale development study. Although the PCA method is limited in making inferences to the causal relationships between items and underlying constructs, it was suitable for the purpose of this thesis. The subscales correctly predicted individual differences in scores, in the expected direction, for care worker and non-care worker samples suggesting good predictive validity. However, the sample size for the care worker and non-care worker samples were too small to conduct a confirmatory factor analysis, which was required to verify the internal factor structure of the nine disposition subscales.

(iii) To identify individual differences between care workers and other occupational groups

The individual difference study provided evidence of demographic and dispositional differences between care workers and non-care workers. However, these differences were not to the extent predicted. The small non-random sampling of care workers and non-care workers may have limited the extent to which findings can be regarded as representative of broader differences between care workers and non-care workers. The lack of evidence for a greater proportion of migrant care workers in this study, countered the prediction that care workers would more likely be born and educated outside of the UK. There was a descriptively slightly higher proportion of migrant workers in the care worker sample than in the non-care worker sample. It is possible that the small and non-random sample in this study may have hindered a truly representative sample completing the questionnaire. Sampling exclusively from urban areas with high proportions of migrant workers may have skewed the sample, making migrant workers higher in both groups. Larger and more representative samples of care workers and comparator samples are required to further assess the extent of these differences.

A more crucial issue for the findings of this study was the occupational heterogeneity of the non-care worker comparator group, relative to the occupational specificity of the care worker group. This may have accounted for the greater variance in the non-care worker sample on the nine dispositional subscales, and may have reduced differences between the samples on aspects such as Cognitive Empathy. The majority of the non-care workers were females, and employed in either: sales, service or administrative occupations. These occupations tend to be populated by females, with sex difference possibly accounted for by female aversion to risky occupations, preferences for work with regular hours, and work that involves interacting with others (Browne, 1998, 2004). Interactions with others are a significant part of these occupations, and may too draw females with perspective taking skills into the work. The direction of the associations between the nine dispositional subscales and participation in care work were descriptively as predicted, with the exception of Cognitive Empathy which showed no descriptive difference between means for the care worker and non-care worker samples. Similarity to the care worker sample in terms of demography may account for this.

7.5. Avenues for Further Research

The theoretical approach and methodological constraints within this thesis have given rise to opportunities for further investigation and refinements.

The development of the participation in care work questionnaire from Chapter 5 may provide a useful tool for recruiting mutualistic care workers. However, further research and scale development is required before this measure could be applied in the recruitment of care workers. Confirmation of the factor structure with suitably large sample sizes would instil greater confidence in the subscales used in the study, further establishing suitability of use with a care worker population. In addition, validating the measure against service users' and line managers' ratings and observations of care worker performance and cooperation, would further support the use of these subscales to aid the recruitment of staff with suitable dispositions for care work. Whilst the central aim of this thesis was not to develop a measure for the recruitment of care workers, this study has provided a basis for further work in the development of one. In

addition, the use of a more distinct occupational control group to compare and make predictions against might yield different associations between the nine dispositional subscales and participation in care work. Further research should explore the differences between care workers and more homogeneous occupational groups expected to differ, as well as those expected to be similar, in order to assess the specificity of these dispositions to paid care workers.

To further incorporate evolutionary theory into analyses of paid care work, we require a proxy measure of fitness (e.g. health) and social network analyses. This will enable the correlation of changes in resource allocation in terms of time and money spent in building networks outside of care work, and the investment in children and other family members from initial participation and duration spent in care work. The poor pay in care work should be offset by social network benefits. As suggested in this thesis, the additional value for this could be gained from the forming of social alliances at work with service users and their families. Consistent with previous literature, and supported by the findings within this thesis (Chapter 4), the social alliances formed are the central component of the work that differentiates it from other low paid occupations (Brown & McIntosh, 2003).

A suitable indirect measure of fitness would be to assess for correlates with disorders and diseases, and how these are associated with social networks on a broader basis. Social networks are associated with improved health, longevity, less cognitive decline, and better prognoses with limiting or life-threatening illnesses (Cohen & Janicki-Deverts, 2009). Mutualistic cooperators engaging in paid care work may experience improvements in health due to their mutualistic tendencies; it would be interesting to pursue the relationship between paid care work, social networks and measures of fitness.

Furthermore, what is essentially missing from this account of mutualism of paid care work is the perspective of the service users, and the additional benefits they may receive from an alliance with a paid care worker. As previously raised, and depicted in Figure 7.1, there may be an asymmetry in the preference for mutualism in the care worker-service user relationship. A different model of care work may be required to account

for the relationship sought and received with paid care workers with the incorporation of service users' experiences and preferences.

7.6. Concluding Comments

Paid care of older adults is delivered in part as a public good in England, but one where care workers receive a relatively low wage for demanding work. The low pay and consequent low socioeconomic position are unlikely to offset these costs. Recruitment and turnover rates are relatively high, but low enough to suggest that other benefits are obtained from engaging in care work. Theorising additional benefits was therefore required to understand the motivations for engaging and remaining in care work. Care workers' behaviour was driven by potential benefits from forming broader social networks and alliances, and by predispositions for engaging in prosocial behaviours. This theoretical approach accounts for the demographic representation of care workers, and provides an explanation of this economic behaviour that gives consideration to the experiences of care workers, culminating in a mutualist social strategy for those processing certain attributes and preferences. In addition, examining care work as a mutualistic social strategy has given rise to focused recommendations for care worker recruitment and retention. Changes in the practice, commissioning and funding of health and social care is required in England to ensure mutualistic cooperators are drawn to care work and remain.

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Appendix 1: Information sheet for interview study

School of Psychology

Information Sheet

University of East London

Project Title: **Identifying the Motivational Factors and Characteristics Associated with Care Work**

Researcher: **Sima Sandhu**

You are invited to take part in the above named research. Before you decide, it is important for you to understand why the research is being carried out and what it will involve.

Background to the study
The aim of the research is to find out why people choose to engage in care work. Health and social care plays an important role in supporting individuals, in which the care workforce are crucial to providing this service. However, there are problems with recruitment and retention in the health and social care sector, particularly among care workers and we want to find out why that is. In this study we aim to examine who the current care workforce is and their motivations for becoming involved and remaining in care work. The results of this study will help to identify, recruit and to retain care workers.

Why I have been chosen?
We are asking adults in paid care work to take part in this study

Do I have to take part?
It is your decision whether or not you take part. If you decide to, you are free to withdraw any time and you will not be asked to give any reason.

What will happen if I take part?
You will be asked to read and sign a consent form, to take part in an interview about your experiences of being a care worker. The interview will take no more than an hour to complete. You will be given an opportunity to ask questions before and after the interview is done.

Are there any possible disadvantages or risks of taking part?
There are no known risks in taking part in this study.

What are the benefits of taking part?
The outcome of the study will provide information on who care workers are and what motivates them to do their work. You will have an opportunity to express your views about the job you and your colleagues do. This information will then be used to inform the development of a larger questionnaire survey of care workers, your interview will help in the development of this questionnaire.

Will my confidentiality be respected?
All information will be treated with the strictest confidentiality. The consent form, which bears your name, will be separated from the rest of the information.

What if something goes wrong?
It is highly unlikely that the interview method used in this study will have any harmful effects. However if you were harmed by taking part in this research, there are no special compensation arrangements.

What will happen to the results of the research study?
The results of the study will be written up as part of a Ph.D. thesis and may also be written up and submitted as a research paper to an academic journal. As part of our confidentiality policy, you will not be identified in any reporting of this research.

Who is organising this research?
The research is being carried out by Ms Sima Sandhu (B.Sc. M.Sc.) as part of her Ph.D. thesis in Psychology. The research is being supervised by Dr T.E. Dickins (Principal Lecturer in Psychology, University of East London).

Contact for further information
If you have any questions please contact Ms Sima Sandhu by phone or email (0208 223 3000, S.Sandhu@uel.ac.uk).

Alternatively, you can write to Ms Sima Sandhu at the School of Psychology, University of East London, Stratford Campus, Romford Road, London. E15 4LZ.

This copy of the information is yours to keep. If you agree to take part, then you will be asked to sign a Consent Form, and you will be given a copy for you to keep.

This research has been approved by the University of East London Research Ethics Committee. For further details please contact Debbie Dada (Administrative Officer for Research) on 0208 223 2976, or email d.dada@uel.ac.uk.

Thank you for taking the time to read this.

Sima Sandhu
Graduate Teaching Assistant and PhD Candidate
School of Psychology
University of East London

Appendix 2: Consent form for interview study

School of Psychology

Consent Form

Project Title: **Identifying the Motivational Factors and Characteristics Associated with Care Work**

Researcher: **Sima Sandhu**

1. I confirm that I have read and understand the Information Sheet for the above study, and have had the opportunity to ask questions.

2. I understand that my taking part is voluntary, and that I am free to withdraw at any time, without giving any reason and without my rights being affected.

3. I agree to take part in the above study

4. I agree to have the interview recorded on a digital voice recorder.

…….……..	……..	……
Name of Participant	Date	Signature
……..	……..	……
Name of Researcher	Date	Signature

Appendix 3: Interview schedule

Deciding to become a care worker

The following questions are about your decision to become a care worker. Try to think back to the time you first decided to apply for a job as a care worker. This might help you answer the questions.

1. What were you doing before you became a care worker?

2. Why do you think you applied to become a care worker?
   Probe: Did you consider any other jobs, if yes/no why?
   Probe: What did you think about when making your decision to apply?

3. What did you hope to gain from becoming a care worker?

4. What characteristics did you think you could offer to the job?
   Probe: Do you think your personality is suited to the job, if yes/no why?

5. What skills, interests or experiences did you think you could offer to the job?
   Probe: Do you think anything in your personal or social life helped you to decide to become a care worker?
   Probe: Was there any particular experience, if so tell me about it?

6. What was your view of care workers before becoming one?
   Probe: Did you have a view of the type of work they did (if yes, explain)?
   Probe: Did you have a view about the type of people care workers are (if yes, explain)?

Experiences of being a care worker

The following questions are about your experiences as a care worker, from when you started to the present day.

7. What do you think are the benefits of being a care worker?
   Probe: What do you like most about your work?
   Probe: What do you find most satisfying about your work?

8. What are the challenges of being a care worker?
   Probe: What parts of being a care worker are the most difficult?

9. Is there anything about being a care worker you don't like as much, if yes, what is it?
   Probe: Are you dissatisfied with any particular aspect of being a care worker, more than others?

10. What skills do you think you have gained since being a care worker, if any?

11. How well does being a care worker fit into other aspects of your life?
    Probe: Has your life changed in any way since being a care worker?
    Probe: Has being a care worker had an impact on your personal and/or social life?
    Probe: Any other positive/negative changes to your life?

12. How do people treat you when they find out that you are a care worker?
    Probe: What do they say?
    Probe: How do they react?

13. Has your view of care workers changed since you have become one, if so how?
    Probe: In what way has your view changed?
    Probe: For the better, or for the worse?

End of interview.

Ask the participant if they have any questions.

Thank the participant for their time and ask if they would like feedback on the findings of the study after project completion.

Appendix 4: Confirmation of ethical approval for the interview study

Dr Tom Dickins
School of Psychology
Stratford

ETH/08/11/0

Dear Dr Dickins,

Application to the Research Ethics Committee: Identifying the Motivational Factors and Characteristics Associated with Care Work. (S Sandhu)

I advise that Members of the Research Ethics Committee have now approved the above application on the terms previously advised to you. The Research Ethics Committee should be informed of any significant changes in the programme that take place after approval has been given. Examples of such changes include any change to the location, number of participants, scope, methodology or composition of investigative team. These examples are not exclusive and the person responsible for the programme must exercise proper judgement in determining what should be brought to the attention of the Committee.

In accepting the terms previously advised to you I would be grateful if you could return the declaration form below, duly signed and dated, confirming that you will inform the committee of any changes to your approved programme.

Yours sincerely

Debbie Dada
Administrative Officer for Research
d.dada@uel.ac.uk
02082232976

Research Ethics Committee: ETH/08/11/0

I hereby agree to inform the Research Ethics Committee of any changes to be made to the above approved programme and any adverse incidents that arise during the conduct of the programme.

Signed:.....Date: .....

Please Print Name:

Appendix 5: Example of coding data items from transcripts

Codes and Initial Notes	Data Extract (Transcription no. /Page no.)
T1	
1. Provided unpaid help for neighbour 2. Considered helpful by another – suggested care work.	"I used to help someone else when I come back home. Thirty three, somebody used to live there and I used to help 'em. She was disabled and her dad couldn't do anything for her. One day he decide and say oh, you are so helpful, why don't you go for this job and I said oh alright then." (T1/P1)
3. Loves to take care of others. 4. Cultural value to take care of her family well. 5. Missed looking after older family members.	"So I went to interview, was a bit nervous, but only I said look I love looking after people, but like you know mostly Indian people look after very good like you know, init. Because that is like our inside values to look after our grandma and granddad as well, when I came to this country I missed them. So I said I oh, I don't mind looking after elderly people I actually enjoyed it." (T1/P2)
6. Love and respect for older people 7. Practical consideration of fitting in with child care.	"Because I love them, elderly people to give them respect. Another reason I think I can go for this job is because I can work nine till one, because of my children so I can be home for me kids and do both things. I only worked nine till one and when they go to school I go full-time." (TI/P2)
8. Helping makes her feel good. 9. Considered helpful by others.	"I feel good inside. I love to help someone and that me children know as well." (T1/P2)
10. Spends time with service users outside of paid care hours. 11. Commitment to service users acknowledged by others.	"I work with dementia people now. Before I was working with everyone, but I'm only working with dementia people now, but now I go into hospital from my heart. I go and see her and even the doctor said the other day, I'm really glad you come and see her, she's got no one. She's got a brother, but he's 90 and she's nearly 100 now, I still go and see her, take care of her, things like that. I'm actually going to see her tomorrow. My manager's really pleased." (T1/P2) "What is satisfying is like tomorrow, I'm going to see her in hospital and that makes me feel good, especially when I go on my own time as well and I spend my own time with them. I really, really like doing these things for them. I have to write it in my book because I need permission from work to see her, but anyway if makes me feel really, really good." (T1/P4)

Appendix 6: Example of sub-theme and theme generation

Main theme: Care work as a propensity and identity (early working up of main themes and sub themes)	
Sub themes	Codes
1. Natural tendency for care giving.	Born to do care work – 205 Uses skills from taking care of animals in care work – 223 Other family members did not have same caring nature – 399 All interest is in care work - like a hobby – 404 Interest and commitment has been for care work – 503 Care work part of her identity – 523 Helping as part of who she is – 524 Role of taking care of others is instinctive – 569 Easy and something she could do – 570 Ability to care is something you are born with – 583 Ability to care is in your nature – 585
2. Aspects of personality suited to care. e.g. patient, understanding, good listener, etc.	Need to be patient – 14 Gets on well with others – 35 Good listener and understanding – 36. Need to be patient – 14 Patient and sympathetic – 61 Patience and tolerance needed in care work – 70 Does not take it personally and tries to forget it – 79 Ability to calm service users – 82 Empathy and patient with others – 95 Patience and communication with service users – listening to them – 142 Likens the patience needed with her child, like that needed for someone with Alzheimer's – 144, 369 Ability to show patience and respect - 280 Consider self caring – 308 Patient and easy going with difficult service users – 366, 367 Need to be sensitive – 370 Patient and listens – 452 Understanding and helpful – 481 Trust – 483 Outgoing person – 504 Easy going – 505 Patient and calm – 571

Appendix 7a: Empathy Measures

Taken from the Interpersonal Reactivity Index (Davis, 1980), a self-report Likert rating scales for how well the statements describes the participant from 0 (does not describe me at all) to 4 (describes me very well).

* Reverse score item.

Perspective-Taking (PT) Subscale

1. I sometimes find it difficult to see things from the “other person's” point of view.*
2. I try to look at everybody's side of a disagreement before I make a decision.
3. I sometimes try to understand my friends better by imagining how things look from their perspective.
4. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.*
5. I believe that there are two sides to every question and try to look at them both.
6. When I'm upset at someone, I usually try to "put myself in their shoes" for a while.
7. Before criticising somebody, I try to imagine how I would feel if I were in their place.

Empathic Concern (EC) Subscale

1. I often have tender, concerned feelings for people less fortunate than me.
2. Sometimes I don't feel very sorry for other people when they are having problems.*
3. When I see someone being taken advantage of, I feel protective towards them.
4. Other people's misfortunes do not usually disturb me a great deal.*
5. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.*
6. I am often quite touched by things that I see happen.
7. I would describe myself as a pretty soft-hearted person.

* Reverse score item.

Appendix 7b: Agreeableness Measures

Taken from the NEO PI-R UK version (Costa & McCrea, 1992; Rust & Lord, 2006), a self-report Likert rating scale circling the responses for each statement that best corresponds to the participant's disagreement or agreement with the statement from Strongly Disagree (0), Disagree (1), Neutral (2), Agree (3), and Strongly Agree (4).

* Reverse score item.

A1 – Trust

1. I tend to be cynical and sceptical of others' intentions.*
2. I believe that most people are basically well-intentioned.
3. I believe that most people will take advantage of you if you let them.*
4. I think most of the people I deal with are honest and trustworthy.
5. I'm suspicious when someone does something nice for me.*
6. My first reaction is to trust people.
7. I tend to assume the best about people.
8. I have a good deal of faith in human nature.

A2 – Straightforwardness

1. I'm not crafty or sly.
2. If necessary, I am willing to manipulate people to get what I want.*
3. I couldn't deceive anyone even if I wanted to.
4. Being perfectly honest is a bad way to do business.*
5. I would hate to be thought of as a hypocrite.
6. Sometimes I trick people into doing what I want.*
7. At times I bully or flatter people into doing what I want them to.*
8. I pride myself on my shrewdness in handling people.*

A3 – Altruism

1. Some people think I'm selfish and egotistical.*
2. I try to be courteous to everyone I meet.
3. Some people think of me as cold and calculating.*
4. I generally try to be thoughtful and considerate.
5. I'm not known for my generosity.*
6. Most people I know like me.
7. I think of myself as a charitable person.
8. I go out of my way to help others if I can.

A4 – Compliance

1. I would rather cooperate with others than compete with them.
2. I can be sarcastic and cutting when I need to be.*
3. I hesitate to express my anger even when it's justified.
4. If I don't like people, I let them know it.*
5. When I've been insulted, I just try to forgive and forget.
6. If someone starts a fight, I'm ready to fight back.*
7. I'm hard-headed and stubborn.*
8. I often get into arguments with my family and co-workers.*

A5 – Modesty

1. I don't mind bragging about my talents and accomplishments.*
2. I'd rather not talk about myself and my achievements.
3. I'm better than most people, and I know it.*
4. I try to be humble.
5. I have a very high opinion of myself.*
6. I feel that I am no better than others, no matter what their condition.
7. I would rather praise others than be praised myself.
8. I'm a superior person.*

A6 – Tender-Mindedness

1. Political leaders need to be more aware of the human side of their policies.
2. I'm hard-headed and tough-minded in my attitudes.*
3. We can never do too much for the poor and elderly.
4. I have no sympathy for beggars.*
5. Human need should always take priority over economic considerations.
6. I believe all human beings are worthy of respect.
7. I have sympathy for others less fortunate than me.
8. I would rather be known as "merciful" than as "just".

Appendix 7c: Social Dominance Orientation - Measure of Equality

Taken from the SDO-14 item version (Pratto, Sidanius, Stallworth & Malle; 1994), a self-report Likert rating scales circling the responses for each object/statement that best corresponds to the participant's positive or negative feeling towards the statement from: very negative (1), negative (2), slightly negative (3), neither positive nor negative (4), slightly positive (5), positive (6), to very positive (7).

* Equality reverse score item.

1. Some groups of people are simply not the equals of others
2. Some people are just more worthy than others
3. Increased economic equality*
4. Increased social equality*
5. This country would be better off if we cared less about how equal all people were
6. Some people are just more deserving than others
7. Equality*
8. If people were treated more equally we would have fewer problems in this country*
9. It is not a problem if some people have more of a chance in life than others
10. Some people are just inferior to others
11. In an ideal world, all nations would be equal*
12. We should try to treat one another as equals as much as possible*
13. To get ahead in life, it is sometimes necessary to step on others
14. It is important that we treat other countries as equals*

Appendix 7d: Lie Scale - Socially Desirable Responding

Taken from the EPQR-A (Francis, Brown & Philipchalk, 1992) a self-report 'yes' or 'no' response to questions about behaviours.

* Reverse score item (Yes response instead of No).

1. Have you ever taken advantage of someone?
2. Have you ever cheated at a game?
3. Do you always practice what you preach?*
4. Were you ever greedy by helping yourself to more than your share of anything?
5. Have you ever blamed someone for doing something you knew was really your fault?
6. Have you ever taken anything (even a pin or button) that belonged to someone else?

Appendix 8: Piloted demographic and personality items developed to assess for Associations with Care Work Questionnaire

Please read the instructions provided before answering any of the questions. Remember your identity will be kept anonymous, and any information you provide will be kept confidential. You also have the right to withdraw at any time.

1. Are you… PLEASE TICK (✓) **ONE** BOX

…male ☐ **…female** ☐

2. What is your age?

PLEASE WRITE IN THE BOX

3. What is your ethnic group? PLEASE TICK (✓) **ONE** BOX

White
- British ☐
- Irish ☐
- Other white background ☐

Mixed
- White & Black Caribbean ☐
- White & Black African ☐
- White & Asian ☐
- Other Mixed background ☐

Chinese ☐

Asian or Asian British
- Indian ☐
- Pakistani ☐
- Bangladeshi ☐
- Other Asian background ☐

Black or Black British
- Caribbean ☐
- African ☐
- Other Black background ☐

Any other group ☐

Please specify……

4. Which country were you born in?

PLEASE WRITE IN THE BOX

5. Which country were you <u>mainly</u> educated in?

PLEASE WRITE IN THE BOX

6. What is your <u>highest</u> educational qualification? (e.g. G.C.S.E., N.V.Q.2, B.Sc. etc.)

PLEASE WRITE IN THE BOX

7. What is your religion? PLEASE TICK (✓) **ONE** BOX

- **None** ☐
- **Christian (including Church of England, Catholic, Protestant and all other Christian denominations)** ☐
- **Buddhist** ☐
- **Hindu** ☐
- **Jewish** ☐
- **Muslim** ☐
- **Sikh** ☐
- **Any other religion** ☐

If you ticked "Any other religion" please specify....

8. What is your marital status? PLEASE TICK (✓) **<u>ALL</u>** THAT APPLY

- **In relationship** ☐
- **Not in a relationship** ☐
- **Civil partnership** ☐
- **Cohabiting with partner** ☐
- **Divorced** ☐
- **Married** ☐
- **Separated** ☐
- **Widowed** ☐

9. What is your current main job?

PLEASE WRITE IN THE BOX

10. How long have you been in this job for?

PLEASE WRITE IN THE BOX

11. What is/was your mother's main job?

PLEASE WRITE IN THE BOX

12. What is/was your father's main job?

PLEASE WRITE IN THE BOX

13. Do you have any children? If yes, Please fill in the table below.
Please use **one** line for each child.

Age of child?	Is the child your own, adopted, fostered, or a stepchild?	Is the child from your current, or a previous relationship?	Is the child from your current partner's pervious relationships?	Is the child from a previous partner's relationship prior to you?

14. Have you ever provided regular support/care for anyone other than your children (e.g. an elderly relative, or a sick friend)? If yes, please fill in the table below about those you have provided care for.

What was your relationship to this person?	How frequently do/did you provide this support/care for?	What was the nature of the support you provided for this person? (e.g. domestic, personal care, social care.)

Given below are a number of statements describing different attitudes and behaviours. Please read each statement carefully, and then circle the number to the right that best matches how you think or feel about the statement. There are no right or wrong answers, so do not spend too much time on any one statement. If you are unsure what the statement means, just give an answer that fits with your understanding of it.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

	SD	D	N	A	SA
1. I tend to be cynical and sceptical of others' intentions	1	2	3	4	5
2. I believe that most people are basically well-intentioned	1	2	3	4	5
3. I'm not crafty or sly	1	2	3	4	5
4. If necessary, I am willing to manipulate people to get what I want	1	2	3	4	5
5. Some groups of people are simply not the equals of others	1	2	3	4	5
6. I sometimes find it difficult to see things from the "other person's" point of view	1	2	3	4	5
7. Some people think I'm selfish and egotistical	1	2	3	4	5
8. I try to be courteous to everyone I meet	1	2	3	4	5
9. I would rather cooperate with others than compete with them	1	2	3	4	5
10. I can be sarcastic and cutting when I need to be	1	2	3	4	5
11. Some people are just more worthy than others	1	2	3	4	5
12. I try to look at everybody's side of a disagreement before I make a decision	1	2	3	4	5
13. I have never taken advantage of someone	1	2	3	4	5
14. I don't mind bragging about my talents and accomplishments	1	2	3	4	5
15. I'd rather not talk about myself and my achievements	1	2	3	4	5
16. Political leaders need to be more aware of the human side of their policies	1	2	3	4	5
17. I'm hard-headed and tough-minded in my attitudes	1	2	3	4	5
18. I would like there to be increased economic equality	1	2	3	4	5
19. I often have tender, concerned feelings for people less fortunate than me	1	2	3	4	5
20. I believe that most people will take advantage of you if you let them	1	2	3	4	5
21. I think most of the people I deal with are honest and trustworthy	1	2	3	4	5
22. I couldn't deceive anyone even if I wanted to	1	2	3	4	5
23. Being perfectly honest is a bad way to do business	1	2	3	4	5
24. I would like there to be increased social equality	1	2	3	4	5
25. Sometimes I don't feel very sorry for other people when they are having problems	1	2	3	4	5
26. I have never cheated at a game	1	2	3	4	5
27. Some people think of me as cold and calculating	1	2	3	4	5
28. I generally try to be thoughtful and considerate	1	2	3	4	5
29. I hesitate to express my anger even when it's justified	1	2	3	4	5

	SD	D	N	A	SA
30. If I don't like people, I let them know it	1	2	3	4	5
31. This country would be better off if we cared less about how equal all people were	1	2	3	4	5
32. I sometimes try to understand my friends better by imagining how things look from their perspective	1	2	3	4	5
33. I'm better than most people, and I know it	1	2	3	4	5
34. I try to be humble	1	2	3	4	5
35. We can never do too much for the poor and elderly	1	2	3	4	5
36. I have no sympathy for beggars	1	2	3	4	5
37. Some people are just more deserving than others	1	2	3	4	5
38. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments	1	2	3	4	5
39. I always practice what I preach	1	2	3	4	5
40. I'm suspicious when someone does something nice for me	1	2	3	4	5
41. My first reaction is to trust people	1	2	3	4	5
42. I would hate to be thought of as a hypocrite	1	2	3	4	5
43. Sometimes I trick people into doing what I want	1	2	3	4	5
44. I would like there to be equality	1	2	3	4	5
45. When I see someone being taken advantage of, I feel protective towards them.	1	2	3	4	5
46. I'm not known for my generosity	1	2	3	4	5
47. Most people I know like me	1	2	3	4	5
48. When I've been insulted, I just try to forgive and forget	1	2	3	4	5
49. If someone starts a fight, I'm ready to fight back	1	2	3	4	5
50. If people were treated more equally we would have fewer problems in this country	1	2	3	4	5
51. Other people's misfortunes do not usually disturb me a great deal	1	2	3	4	5
52. I was never greedy by helping myself to more than my share of anything	1	2	3	4	5
53. I have a very high opinion of myself	1	2	3	4	5
54. I feel that I am no better than others, no matter what their condition	1	2	3	4	5
55. Human need should always take priority over economic considerations	1	2	3	4	5
56. I believe all human beings are worthy of respect	1	2	3	4	5
57. It is not a problem if some people have more of a chance in life than others	1	2	3	4	5
58. I believe that there are two sides to every question and try to look at them both	1	2	3	4	5
59. I tend to assume the best about people	1	2	3	4	5
60. I have a good deal of faith in human nature	1	2	3	4	5
61. At times I bully or flatter people into doing what I want them to	1	2	3	4	5
62. I pride myself on my shrewdness in handling people	1	2	3	4	5
63. Some people are just inferior to others	1	2	3	4	5
64. When I'm upset at someone, I usually try to "put myself in their shoes" for a while	1	2	3	4	5
65. I have never blamed someone for doing something I knew was really my fault	1	2	3	4	5
66. I think of myself as a charitable person	1	2	3	4	5

	SD	D	N	A	SA
67. I go out of my way to help others if I can	1	2	3	4	5
68. I'm hard-headed and stubborn	1	2	3	4	5
69. I often get into arguments with my family and co-workers	1	2	3	4	5
70. In an ideal world, all nations would be equal	1	2	3	4	5
71. When I see someone being treated unfairly, I sometimes don't feel very much pity for them	1	2	3	4	5
72. I would rather praise others than be praised myself	1	2	3	4	5
73. I'm a superior person	1	2	3	4	5
74. We should try to treat one another as equals as much as possible	1	2	3	4	5
75. I am often quite touched by things that I see happen	1	2	3	4	5
76. I have never taken anything (even a pin or button) that belonged to someone else	1	2	3	4	5
77. I have sympathy for others less fortunate than me	1	2	3	4	5
78. I would rather be known as "merciful" than as "just"	1	2	3	4	5
79. To get ahead in life, it is sometimes necessary to step on others	1	2	3	4	5
80. It is important that we treat other countries as equals	1	2	3	4	5
81. Before criticizing somebody, I try to imagine how I would feel if I were in their place	1	2	3	4	5
82. I would describe myself as a pretty soft-hearted person	1	2	3	4	5

End of questionnaire

Thank you for your time.

Appendix 9: Information sheet for questionnaire development study

School of Psychology

Information Sheet

Project Title: **A Questionnaire to Assess for Associations with Care Work**

Researcher: **Sima Sandhu**

You are invited to take part in the research named above. Before you decide, it is important for you to understand why the research is being carried out and what it will involve.

Background to the study
The aim of the research is to develop a questionnaire that will be used to investigate the factors associated with care work. People working in health and social care play an important role in supporting individuals to maintain independence in daily living, such as the elderly and adults with physical and sensory impairments. It is important to learn more about those providing care services, as care workers are crucial to those in need of support. The results of this study will be used to develop a questionnaire that will be given to care workers and other occupational groups.

Why I have been chosen?
We are asking adults in the general population to take part in this study

Do I have to take part?
It is your decision whether or not you take part. If you decide to, you are free to withdraw at any time and you will not be asked to give any reason.

What will happen if I take part?
You will be asked to read and sign a consent form and complete a questionnaire about your background interests and caring responsibilities. The questionnaire will take no more than 30 minutes to complete. Should you have any questions or concerns, you will be given the opportunity to contact the researcher before and after completing the questionnaire.

Are there any possible disadvantages or risks of taking part?
There are no known risks in taking part in this study.

What are the benefits of taking part?
Although you will not directly benefit from taking part in this study, your responses will help in the research into why people are (or are not) interested in health and social care work.

Will my confidentiality be respected?
All information will be treated with strict confidentiality. The consent form, which bears your name, will be separated from the rest of the information.

What if something goes wrong?
It is highly unlikely that the questionnaire method used in this study will have any harmful effects. However, if you were harmed by taking part in this research, there are no special compensation arrangements unless legal negligence is established.

What will happen to the results of the research study?
The results of the study will be written up as part of a doctorate thesis and may also be written up and submitted as a research paper to an academic journal. As part of our confidentiality policy, you will not be identified in any reporting of this research.

Who is organising this research?
The research is being carried out by Ms Sima Sandhu as part of her doctorate thesis in Psychology. The research is being supervised by Dr T.E. Dickins (Principal Lecturer in Psychology, University of East London).

Contact for further information
If you have any questions please contact Ms Sima Sandhu by phone or email (0208 223 3000, S.Sandhu@uel.ac.uk).

Alternatively, you can write to Ms Sima Sandhu at the School of Psychology, University of East London, Stratford Campus, Romford Road, London. E15 4LZ.

This research has been approved by the University of East London Research Ethics Committee. For further details please contact Debbie Dada (Administrative Officer for Research) on 0208 223 2976, or email d.dada@uel.ac.uk.

This copy of the information sheet is yours to keep. If you agree to take part, then you will be asked to sign a Consent Form, and you will be given a copy for you to keep.

Thank you for taking the time to read this.

Sima Sandhu
Graduate Teaching Assistant and PhD Candidate
School of Psychology
University of East London

Appendix 10: Consent form for questionnaire development study

School of Psychology

Consent Form

Project Title: **A Questionnaire to Assess for Associations with Care Work**

Researcher: **Sima Sandhu**

1. I confirm that I have read and understand the Information Sheet for the above study, and have had the opportunity to ask questions.

2. I understand that my taking part is voluntary, and that I am free to withdraw at any time, without giving any reason and without my rights being affected.

3. I agree to take part in the above study.

……..	……..	……
Name of Participant	Date	Signature
……..	……..	……
Name of Researcher	Date	Signature

Appendix 11: Confirmation of ethical approval for the development of a questionnaire study

Dr Tom Dickins
School of Psychology
Stratford

ETH/09/72

Dear Tom,

Application to the Research Ethics Committee: Development of a Questionnaire to Assess Interest in Care Work (S Sandhu)

I advise that the University Research Ethics Committee has now approved the above application on the terms previously advised to you. The Research Ethics Committee should be informed of any significant changes that take place after approval has been given. Examples of such changes include any change to the scope, methodology or composition of investigative team. These examples are not exclusive and the person responsible for the programme must exercise proper judgement in determining what should be brought to the attention of the Committee.

In accepting the terms previously advised to you I would be grateful if you could return the declaration form below, duly signed and dated, confirming that you will inform the committee of any changes to your approved programme.

Yours sincerely

Debbie Dada
Administrative Officer for Research
d.dada@uel.ac.uk
02082232976

Research Ethics Committee: ETH/09/72/0

I hereby agree to inform the Research Ethics Committee of any changes to be made to the above approved programme and any adverse incidents that arise during the conduct of the programme.

Signed:.....Date: .....

Please Print Name:

Appendix 12a: Output table for Horn's PA

Taken and modified from F A C T O R
Unrestricted Factor Analysis
Release Version 7.02
January, 2007
Rovira i Virgili University
Tarragona, SPAIN
Programming: Urbano Lorenzo-Seva
Mathematical Specification: Urbano Lorenzo-Seva & Pere J. Ferrando
Date: Wednesday, October 21, 2009 Time: 16:02:26

DETAILS OF ANALYSIS
Number of participants: 525
Number of variables: 82
Variables included in the analysis: ALL
Variables excluded in the analysis: NONE
Procedure for determining the number of dimensions: Parallel Analysis (PA) Number of random data matrices = 500

Variable	Real-data eigenvalues	Mean of random eigenvalues	95 percentile of random eigenvalues
1	14.6981**	1.88700	1.95126
2	4.00237**	1.82109	1.86962
3	3.64070**	1.77312	1.81875
4	3.30981**	1.73169	1.76822
5	2.52518**	1.69674	1.72797
6	2.12277**	1.66181	1.69345
7	1.95706**	1.62968	1.66154
8	1.74532**	1.59994	1.62806
9	1.69402**	1.57155	1.59920
10	1.55748*	1.54427	1.57176
11	1.35778	1.51742	1.54532
12	1.34123	1.49278	1.51830
13	1.26161	1.46713	1.49157
14	1.17896	1.44369	1.46711
15	1.14966	1.41968	1.44500
16	1.11741	1.39795	1.41979
17	1.09190	1.37621	1.39914
18	1.06373	1.35607	1.37678
19	1.03684	1.33457	1.35556

** Advised number of dimensions when 95 percentile is considered: 9
* Advised number of dimensions when mean is considered: 10

Appendix 12b: PCA factor correlation coefficient matrix

Taken and modified from SPSS v.18 output. Figures in **bold** are discussed in Chapter 5.

Factor Correlation Matrix

Factor	1	2	3	4	5	6	7	8	9
1	-	-.007	.106	-.087	.090	-.044	.086	-.193	.058
2	-.007	-	.141	-.080	.149	-.162	.171	-.118	.133
3	.106	.141	-	-.152	.180	-.201	.081	-.227	.176
4	-.087	-.080	-.152	-	-.127	.099	-.167	.059	-.009
5	.090	.149	.180	-.127	-	-.225	.172	-.155	.166
6	-.044	-.162	-.201	.099	-.225	-	-.152	**.261**	-.215
7	.086	.171	.081	-.167	.172	-.152	-	**-.260**	.097
8	-.193	-.118	-.227	.059	-.155	.261	-.260	-	-.260
9	.058	.133	.176	-.009	.166	-.215	.097	**-.260**	-

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Appendix 12c: Item-total correlations and Cronbach's alphas

Taken and modified from SPSS v.18 output.

Item analysis for Inequality between People subscale (α = .800)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q37	.587	.762
Q11	.628	.743
Q5	.604	.756
Q63	.646	.739

Item analysis for Socially Desirable Responding subscale (α = .690)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q76	.498	.616
Q26	.456	.635
Q13	.447	.639
Q65	.409	.656
Q52	.413	.653

Item analysis for Trust in Human Nature subscale (α = .768)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q60	.583	.710
Q41	.542	.725
Q1	.545	.726
Q2	.553	.724
Q21	.487	.743

Item analysis for Hardheadedness subscale (α = .660)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q68	.467	.582
Q17	.432	.600
Q30	.426	.605
Q29	.340	.646
Q49	.413	.608

Item analysis for Manipulative subscale (α = .679)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q27	.443	.625
Q43	.496	.590
Q7	.431	.634
Q61	.481	.601

Item analysis for Cognitive Empathy – Perspective Taking subscale (α = .753)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q12	.496	.718
Q58	.499	.719
Q64	.555	.697
Q81	.548	.699
Q32	.513	.712

Item analysis for Modesty subscale (α = .708)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q53	.475	.657
Q33	.411	.681
Q14	.556	.620
Q15	.476	.655
Q72	.408	.682

Item analysis for Societal and Economic Equality subscale (α = .756)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q24	.594	.690
Q50	.536	.707
Q80	.546	.706
Q31	.521	.714
Q55	.437	.742

Item analysis for Emotional Empathy – Concern for Others subscale (α = .715)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q19	.527	.645
Q75	.497	.658
Q67	.525	.647
Q77	.359	.711
Q66	.462	.673

Appendix 13: Information sheet for questionnaire assessing for associations with care work

School of Psychology

Information Sheet

Project Title: **A Questionnaire Survey to Assess Differences between Care Workers and Other Occupational Groups**

Researcher: **Sima Sandhu**

You are invited to take part in the research named above. Before you decide, it is important for you to understand why the research is being carried out and what it will involve.

Background to the study
The aim of the survey is to investigate differences between care workers and other occupational groups. People working in health and social care play an important role in supporting individuals to maintain independence in daily living, such as the elderly and adults with physical and sensory impairments. It is important to learn more about those providing care services, as care workers are crucial to those in need of support. The results of this study will be used to develop policy strategies that could be used to recruit and retain care workers.

Why I have been chosen?
We are asking care workers and adults in the general working population to take part in this study.

Do I have to take part?
It is your decision whether or not you take part. If you decide to, you are free to withdraw at any time and you will not be asked to give any reason.

What will happen if I take part?
You will be asked to read and sign a consent form and complete a questionnaire about your background interests and caring responsibilities. The questionnaire will take no more than 20 minutes to complete. Should you have any questions or concerns, you will be given the opportunity to contact the researcher before, during and after completing the questionnaire.

Should you prefer, you can complete the questionnaire and consent form online at the following web address, instead of by post:

http://www.surveymonkey.com/s/CareWorkers

Are there any possible disadvantages or risks of taking part?
There are no known risks in taking part in this study.

What are the benefits of taking part?
Although you will not directly benefit from taking part in this study, your responses will help in the research into why people are (or are not) interested in health and social care work.

Will my confidentiality be respected?
All information will be treated with strict confidentiality. The consent form, which bears your name, will be separated from the rest of the information.

What if something goes wrong?
It is highly unlikely that the questionnaire method used in this survey will have any harmful effects. However, if you were harmed by taking part in this research, there are no special compensation arrangements unless legal negligence is established.

What will happen to the results of the research study?
The results of the study will be written up as part of a doctorate thesis and may also be written up and submitted as a research paper to an academic journal. As part of our confidentiality policy, you will not be identified in any reporting of this research.

Who is organising this research?
The research is being carried out by Ms Sima Sandhu as part of her doctorate thesis in Psychology. The research is being supervised by Dr T.E. Dickins (Reader in Psychology, University of East London).

Contact for further information
If you have any questions please contact Ms Sima Sandhu by phone/text or email (0208 223 3000, S.Sandhu@uel.ac.uk).

Alternatively, you can write to Ms Sima Sandhu at the School of Psychology, University of East London, Stratford Campus, Water Lane, London. E15 4LZ.

This research has been approved by the University of East London Research Ethics Committee. For further details please contact Debbie Dada/Simiso Jubane (Administrative Officers for Research) on 0208 223 2976, or email d.dada@uel.ac.uk/s.jubane@uel.ac.uk.

This copy of the information sheet is yours to keep. If you agree to take part, then you will be asked to sign a Consent Form, and you will be given a copy for you to keep.

Thank you for taking the time to read this.

Sima Sandhu
Graduate Teaching Assistant and PhD Candidate
School of Psychology
University of East London

Appendix 14: Consent form for questionnaire assessing for associations with care work

School of Psychology

Consent Form

Project Title: **A Questionnaire to Assess Differences between Care Workers and Other Occupational Groups**

Researcher: **Sima Sandhu**

1. I confirm that I have read and understand the Information Sheet for the above study, and have been given the opportunity to ask questions.

2. I understand that my taking part is voluntary, and that I am free to withdraw at any time, without giving any reason and without my rights being affected.

3. I agree to take part in the above study.

……..	……..	……
Name of Participant	Date	Signature

……..	……..	……
Name of Researcher	Date	Signature

Appendix 15a: Nine Dispositional Subscales

Inequality between People (α = .800)

3. Some groups of people are simply not the equals of others
5. Some people are just more worthy than others
21. Some people are just more deserving than others
32. Some people are just inferior to others

Socially Desirable Responding (α = .690)

7. I have never taken advantage of someone
14. I have never cheated at a game
26. I was never greedy by helping myself to more than my share of anything
34. I have never blamed someone for doing something I knew was really my fault
40. I have never taken anything (even a pin or button) that belonged to someone else

Trust in Human Nature (α = .768)

1. I tend to be cynical and sceptical of others' intentions (reverse)
2. I believe that most people are basically well-intentioned
12. I think most of the people I deal with are honest and trustworthy
22. My first reaction is to trust people
30. I have a good deal of faith in human nature

Hard-headedness (α = .660)

10. I'm hard-headed and tough-minded in my attitudes
16. I hesitate to express my anger even when it's justified (reverse)
17. If I don't like people, I let them know it
24. If someone starts a fight, I'm ready to fight back
37. I'm hard-headed and stubborn

Manipulative (α = .679)

4. Some people think I'm selfish and egotistical
15. Some people think of me as cold and calculating
23. Sometimes I trick people into doing what I want
31. At times I bully or flatter people into doing what I want them to

Cognitive Empathy – Perspective Taking (α = .753)

6. I try to look at everybody's side of a disagreement before I make a decision
19. I sometimes try to understand my friends better by imagining how things look from their perspective
29. I believe that there are two sides to every question and try to look at them both
33. When I'm upset at someone, I usually try to "put myself in their shoes" for a while
43. Before criticizing somebody, I try to imagine how I would feel if I were in their place

Modesty (α = .708)

8. I don't mind bragging about my talents and accomplishments (reverse)
9. I'd rather not talk about myself and my achievements
20. I'm better than most people, and I know it (reverse)
27. I have a very high opinion of myself (reverse)
38. I would rather praise others than be praised myself

Societal and Economic Equality (α = .756)

13. I would like there to be increased social equality
18. This country would be better off if we cared less about how equal all people were (reverse)
25. If people were treated more equally we would have fewer problems in this country
28. Human need should always take priority over economic considerations
42. It is important that we treat other countries as equals

Emotional Empathy – Concern for Others (α = .715)

11. I often have tender, concerned feelings for people less fortunate than me
35. I think of myself as a charitable person
36. I go out of my way to help others if I can
39. I am often quite touched by things that I see happen
41. I have sympathy for others less fortunate than me

Appendix 15b: Social Value Orientation Task

Taken from the Social Value Orientation - 9 item decomposed game (Van Lange et al, 1997).

In this task imagine that you have been partnered with another person, whom we will refer to as the "Other". This other person is someone you do not know and will not knowingly meet in the future.

Both you and the "Other" will be making choices by circling <u>either</u> A, B, or C. Your choices will produce points for you and the "Other" person. Every point has value to you and the "Other" person. The more points you accumulate, the better for you. The more points the "Other" accumulates, the better for him/her.

Here's an example of how it works:

	A	**B**	**C**
You get	**500**	**500**	**550**
Other gets	**100**	**500**	**300**

In this example, if you choice A you get 500 points and the other gets 100; if you choose B, you get 500 points and the other 500; if you choose C; you get 550 and the other 300.

Before you make choices, please keep in mind that there are no right or wrong answers. Choose the answer you prefer, for whatever reason.

For each of the nine choice situations, please circle <u>either</u> A, B, or C.

	A	B	C
You get	480	540	480
Other gets	80	280	480

	A	B	C
You get	560	500	500
Other gets	300	500	100

	A	B	C
You get	520	520	580
Other gets	520	120	320

	A	B	C
You get	500	560	490
Other gets	100	300	490

	A	B	C
You get	560	500	490
Other gets	300	500	90

	A	B	C
You get	500	500	570
Other gets	500	100	300

	A	B	C
You get	510	560	510
Other gets	510	300	110

	A	B	C
You get	550	500	500
Other gets	300	100	500

	A	B	C
You get	480	490	540
Other gets	100	490	300

Appendix 16a: Questionnaire to assess for associations with care work – Version 1

Please read the instructions provided before answering any of the questions. Remember your identity will be kept anonymous, and any information you provide will be kept confidential. You also have the right to withdraw at any time.

1. Are you… PLEASE TICK (✓) **ONE** BOX

…male ☐ **…female** ☐

2. What is your age?

PLEASE WRITE IN THE BOX

3. What is your ethnic group? PLEASE TICK (✓) **ONE** BOX

White
- British ☐
- Irish ☐
- Other white background ☐

Mixed
- White & Black Caribbean ☐
- White & Black African ☐
- White & Asian ☐
- Other Mixed background ☐

Chinese ☐

Asian or Asian British
- Indian ☐
- Pakistani ☐
- Bangladeshi ☐
- Other Asian background ☐

Black or Black British
- Caribbean ☐
- African ☐
- Other Black background ☐

Any other group ☐
Please specify……

4. Which country were you born in?

PLEASE WRITE IN THE BOX

5. Which country were you mainly educated in?

PLEASE WRITE IN THE BOX

6. What is your highest educational qualification? (e.g. G.C.S.E., N.V.Q.2, B.Sc. etc.)

PLEASE WRITE IN THE BOX

7. What is your religion? PLEASE TICK (✓) **ONE** BOX

- **None** ☐
- **Christian (including Church of England, Catholic, Protestant and all other Christian denominations)** ☐
- **Buddhist** ☐
- **Hindu** ☐
- **Jewish** ☐
- **Muslim** ☐
- **Sikh** ☐
- **Any other religion** ☐

If you ticked "Any other religion" please specify....

8. What is your marital status? PLEASE TICK (✓) **ALL** THAT APPLY

- **In relationship** ☐
- **Not in a relationship** ☐
- **Civil partnership** ☐
- **Cohabiting with partner** ☐
- **Divorced** ☐
- **Married** ☐
- **Separated** ☐
- **Widowed** ☐

9. What is your current main job?

PLEASE WRITE IN THE BOX

10. How long have you been in this job for?

PLEASE WRITE IN THE BOX

11. What is/was your mother's main job?

PLEASE WRITE IN THE BOX

12. What is/was your father's main job?

PLEASE WRITE IN THE BOX

13. Do you have any children? If yes, Please fill in the table below.
Please use **one** line for each child.

Age of child?	**Is the child your own, adopted, fostered, or a stepchild?**	**Is the child from your current, or a previous relationship?**	**Is the child from your current partner's pervious relationships?**	**Is the child from a previous partner's relationship prior to you?**

14. Have you ever provided regular support/care for anyone other than your children (e.g. an elderly relative, or a sick friend)? If yes, please fill in the table below about those you have provided care for.

What was your relationship to this person?	**How long did you provide this support/care for?**	**What was the nature of the support you provided for this person?** (e.g. domestic, personal care, social care.)

In this task imagine that you have been partnered with another person, whom we will refer to as the "Other". This other person is someone you do not know and will not knowingly meet in the future.

Both you and the "Other" will be making choices by circling either A, B, or C. Your choices will produce points for you and the "Other" person. Every point has value to you and the "Other" person. The more points you accumulate, the better for you. The more points the "Other" accumulates, the better for him/her.

Here's an example of how it works:

	A	B	C
You get	**500**	**500**	**550**
Other gets	**100**	**500**	**300**

In this example, if you choice A you get 500 points and the other gets 100; if you choose B, you get 500 points and the other 500; if you choose C; you get 550 and the other 300.

Before you make choices, please keep in mind that there are no right or wrong answers. Choose the answer you prefer, for whatever reason.

PLEASE TURNOVER TO START.

For each of the nine choice situations, please circle <u>either</u> A, B, or C.

	A	B	C
You get	480	540	480
Other gets	80	280	480

	A	B	C
You get	560	500	500
Other gets	300	500	100

	A	B	C
You get	520	520	580
Other gets	520	120	320

	A	B	C
You get	500	560	490
Other gets	100	300	490

	A	B	C
You get	560	500	490
Other gets	300	500	90

	A	B	C
You get	500	500	570
Other gets	500	100	300

	A	B	C
You get	510	560	510
Other gets	510	300	110

	A	B	C
You get	550	500	500
Other gets	300	100	500

	A	B	C
You get	480	490	540
Other gets	100	490	300

Given below are a number of statements describing different attitudes and behaviours. Please read each statement carefully, and then circle the number to the right that best matches how you think or feel about the statement. There are no right or wrong answers, so do not spend too much time on any one statement. If you are unsure what the statement means, just give an answer that fits with your understanding of it.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

	SD	D	N	A	SA
1. I tend to be cynical and sceptical of others' intentions	1	2	3	4	5
2. I believe that most people are basically well-intentioned	1	2	3	4	5
3. Some groups of people are simply not the equals of others	1	2	3	4	5
4. Some people think I'm selfish and egotistical	1	2	3	4	5
5. Some people are just more worthy than others	1	2	3	4	5
6. I try to look at everybody's side of a disagreement before I make a decision	1	2	3	4	5
7. I have never taken advantage of someone	1	2	3	4	5
8. I don't mind bragging about my talents and accomplishments	1	2	3	4	5
9. I'd rather not talk about myself and my achievements	1	2	3	4	5
10. I'm hard-headed and tough-minded in my attitudes	1	2	3	4	5
11. I often have tender, concerned feelings for people less fortunate than me	1	2	3	4	5
12. I think most of the people I deal with are honest and trustworthy	1	2	3	4	5
13. I agree with increased social equality	1	2	3	4	5
14. I have never cheated at a game	1	2	3	4	5
15. Some people think of me as cold and calculating	1	2	3	4	5
16. I hesitate to express my anger even when it's justified	1	2	3	4	5
17. If I don't like people, I let them know it	1	2	3	4	5
18. This country would be better off if we cared less about how equal all people were	1	2	3	4	5
19. I sometimes try to understand my friends better by imagining how things look from their perspective	1	2	3	4	5
20. I'm better than most people, and I know it	1	2	3	4	5
21. Some people are just more deserving than others	1	2	3	4	5
22. My first reaction is to trust people	1	2	3	4	5
23. Sometimes I trick people into doing what I want	1	2	3	4	5
24. If someone starts a fight, I'm ready to fight back	1	2	3	4	5
25. If people were treated more equally we would have fewer problems in this country	1	2	3	4	5
26. I was never greedy by helping myself to more than my share of anything	1	2	3	4	5
27. I have a very high opinion of myself	1	2	3	4	5
28. Human need should always take priority over economic considerations	1	2	3	4	5

	SD	D	N	A	SA
29. I believe that there are two sides to every question and try to look at them both	1	2	3	4	5
30. I have a good deal of faith in human nature	1	2	3	4	5
31. At times I bully or flatter people into doing what I want them to	1	2	3	4	5
32. Some people are just inferior to others	1	2	3	4	5
33. When I'm upset at someone, I usually try to "put myself in their shoes" for a while	1	2	3	4	5
34. I have never blamed someone for doing something I knew was really my fault	1	2	3	4	5
35. I think of myself as a charitable person	1	2	3	4	5
36. I go out of my way to help others if I can	1	2	3	4	5
37. I'm hard-headed and stubborn	1	2	3	4	5
38. I would rather praise others than be praised myself	1	2	3	4	5
39. I am often quite touched by things that I see happen	1	2	3	4	5
40. I have never taken anything (even a pin or button) that belonged to someone else	1	2	3	4	5
41. I have sympathy for others less fortunate than me	1	2	3	4	5
42. It is important that we treat other countries as equals	1	2	3	4	5
43. Before criticizing somebody, I try to imagine how I would feel if I were in their place	1	2	3	4	5

End of questionnaire

Thank you for your time.

Please send your completed questionnaire to the following address:

Sima Sandhu
School of Psychology
University of East London
Stratford Campus
Water Lane
London
E15 4LZ

Appendix 16b: Questionnaire to assess for associations with care work – Version 2

Please read the instructions provided before answering any of the questions. Remember your identity will be kept anonymous, and any information you provide will be kept confidential. You also have the right to withdraw at any time.

1. Are you… PLEASE TICK (✓) **ONE** BOX

…male ☐ **…female** ☐

2. What is your age?

PLEASE WRITE IN THE BOX

3. What is your ethnic group? PLEASE TICK (✓) **ONE** BOX

White
- British ☐
- Irish ☐
- Other white background ☐

Mixed
- White & Black Caribbean ☐
- White & Black African ☐
- White & Asian ☐
- Other Mixed background ☐

Chinese ☐

Asian or Asian British
- Indian ☐
- Pakistani ☐
- Bangladeshi ☐
- Other Asian background ☐

Black or Black British
- Caribbean ☐
- African ☐
- Other Black background ☐

Any other group ☐
Please specify……

4. Which country were you born in?

PLEASE WRITE IN THE BOX

5. Which country were you mainly educated in?

PLEASE WRITE IN THE BOX

6. What is your highest educational qualification? (e.g. G.C.S.E., N.V.Q.2, B.Sc. etc.)

PLEASE WRITE IN THE BOX

7. What is your religion? PLEASE TICK (✓) **ONE** BOX

- **None** ☐
- **Christian (including Church of England, Catholic, Protestant and all other Christian denominations)** ☐
- **Buddhist** ☐
- **Hindu** ☐
- **Jewish** ☐
- **Muslim** ☐
- **Sikh** ☐
- **Any other religion** ☐

If you ticked "Any other religion" please specify....

8. What is your marital status? PLEASE TICK (✓) **ALL** THAT APPLY

- **In relationship** ☐
- **Not in a relationship** ☐
- **Civil partnership** ☐
- **Cohabiting with partner** ☐
- **Divorced** ☐
- **Married** ☐
- **Separated** ☐
- **Widowed** ☐

9. What is your current main job?

PLEASE WRITE IN THE BOX

10. How long have you been in this job for?

PLEASE WRITE IN THE BOX

11. What is/was your mother's main job?

PLEASE WRITE IN THE BOX

12. What is/was your father's main job?

PLEASE WRITE IN THE BOX

13. Do you have any children? If yes, Please fill in the table below.
Please use **one** line for each child.

Age of child?	Is the child your own, adopted, fostered, or a stepchild?	Is the child from your current, or a previous relationship?	Is the child from your current partner's pervious relationships?	Is the child from a previous partner's relationship prior to you?

14. Have you ever provided regular support/care for anyone other than your children (e.g. an elderly relative, or a sick friend)? If yes, please fill in the table below about those you have provided care for.

What was your relationship to this person?	How long did you provide this support/care for?	What was the nature of the support you provided for this person? (e.g. domestic, personal care, social care.)

Given below are a number of statements describing different attitudes and behaviours. Please read each statement carefully, and then circle the number to the right that best matches how you think or feel about the statement. There are no right or wrong answers, so do not spend too much time on any one statement. If you are unsure what the statement means, just give an answer that fits with your understanding of it.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

	SD	D	N	A	SA
1. I tend to be cynical and sceptical of others' intentions	1	2	3	4	5
2. I believe that most people are basically well-intentioned	1	2	3	4	5
3. Some groups of people are simply not the equals of others	1	2	3	4	5
4. Some people think I'm selfish and egotistical	1	2	3	4	5
5. Some people are just more worthy than others	1	2	3	4	5
6. I try to look at everybody's side of a disagreement before I make a decision	1	2	3	4	5
7. I have never taken advantage of someone	1	2	3	4	5
8. I don't mind bragging about my talents and accomplishments	1	2	3	4	5
9. I'd rather not talk about myself and my achievements	1	2	3	4	5
10. I'm hard-headed and tough-minded in my attitudes	1	2	3	4	5
11. I often have tender, concerned feelings for people less fortunate than me	1	2	3	4	5
12. I think most of the people I deal with are honest and trustworthy	1	2	3	4	5
13. I agree with increased social equality	1	2	3	4	5
14. I have never cheated at a game	1	2	3	4	5
15. Some people think of me as cold and calculating	1	2	3	4	5
16. I hesitate to express my anger even when it's justified	1	2	3	4	5
17. If I don't like people, I let them know it	1	2	3	4	5
18. This country would be better off if we cared less about how equal all people were	1	2	3	4	5
19. I sometimes try to understand my friends better by imagining how things look from their perspective	1	2	3	4	5
20. I'm better than most people, and I know it	1	2	3	4	5
21. Some people are just more deserving than others	1	2	3	4	5
22. My first reaction is to trust people	1	2	3	4	5
23. Sometimes I trick people into doing what I want	1	2	3	4	5
24. If someone starts a fight, I'm ready to fight back	1	2	3	4	5
25. If people were treated more equally we would have fewer problems in this country	1	2	3	4	5
26. I was never greedy by helping myself to more than my share of anything	1	2	3	4	5
27. I have a very high opinion of myself	1	2	3	4	5
28. Human need should always take priority over economic considerations	1	2	3	4	5

	SD	D	N	A	SA
29. I believe that there are two sides to every question and try to look at them both	1	2	3	4	5
30. I have a good deal of faith in human nature	1	2	3	4	5
31. At times I bully or flatter people into doing what I want them to	1	2	3	4	5
32. Some people are just inferior to others	1	2	3	4	5
33. When I'm upset at someone, I usually try to "put myself in their shoes" for a while	1	2	3	4	5
34. I have never blamed someone for doing something I knew was really my fault	1	2	3	4	5
35. I think of myself as a charitable person	1	2	3	4	5
36. I go out of my way to help others if I can	1	2	3	4	5
37. I'm hard-headed and stubborn	1	2	3	4	5
38. I would rather praise others than be praised myself	1	2	3	4	5
39. I am often quite touched by things that I see happen	1	2	3	4	5
40. I have never taken anything (even a pin or button) that belonged to someone else	1	2	3	4	5
41. I have sympathy for others less fortunate than me	1	2	3	4	5
42. It is important that we treat other countries as equals	1	2	3	4	5
43. Before criticizing somebody, I try to imagine how I would feel if I were in their place	1	2	3	4	5

In this task imagine that you have been partnered with another person, whom we will refer to as the "Other". This other person is someone you do not know and will not knowingly meet in the future.

Both you and the "Other" will be making choices by circling <u>either</u> A, B, or C. Your choices will produce points for you and the "Other" person. Every point has value to you and the "Other" person. The more points you accumulate, the better for you. The more points the "Other" accumulates, the better for him/her.

Here's an example of how it works:

	A	B	C
You get	**500**	**500**	**550**
Other gets	**100**	**500**	**300**

In this example, if you choice A you get 500 points and the other gets 100; if you choose B, you get 500 points and the other 500; if you choose C; you get 550 and the other 300.

Before you make choices, please keep in mind that there are no right or wrong answers. Choose the answer you prefer, for whatever reason.

PLEASE TURNOVER TO START.

For each of the nine choice situations, please circle <u>either</u> A, B, or C.

	A	B	C
You get	480	540	480
Other gets	80	280	480

	A	B	C
You get	560	500	500
Other gets	300	500	100

	A	B	C
You get	520	520	580
Other gets	520	120	320

	A	B	C
You get	500	560	490
Other gets	100	300	490

	A	B	C
You get	560	500	490
Other gets	300	500	90

	A	B	C
You get	500	500	570
Other gets	500	100	300

	A	B	C
You get	510	560	510
Other gets	510	300	110

	A	B	C
You get	550	500	500
Other gets	300	100	500

	A	B	C
You get	480	490	540
Other gets	100	490	300

End of questionnaire

Thank you for your time.

Please send your completed questionnaire to the following address:

Sima Sandhu
School of Psychology
University of East London
Stratford Campus
Water Lane
London
E15 4LZ

Appendix 17: Confirmation of ethical approval for the interview study

Tom Dickins
School of Psychology, Stratford

ETH/11/88

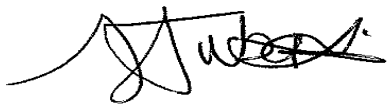
Dear Tom,

Application to the Research Ethics Committee: Assessing for differences between care workers and other occupational groups. (S Sandhu).

I advise that Members of the Research Ethics Committee have now approved the above application on the terms previously advised to you. The Research Ethics Committee should be informed of any significant changes that take place after approval has been given. Examples of such changes include any change to the scope, methodology or composition of investigative team. These examples are not exclusive and the person responsible for the programme must exercise proper judgement in determining what should be brought to the attention of the Committee.

In accepting the terms previously advised to you I would be grateful if you could return the declaration form below, duly signed and dated, confirming that you will inform the committee of any changes to your approved programme.

Yours sincerely



Simiso Jubane
Admission and Ethics Officer
s.jubane@uel.ac.uk
02082232976

Research Ethics Committee: ETH/11/88

I hereby agree to inform the Research Ethics Committee of any changes to be made to the above approved programme and any adverse incidents that arise during the conduct of the programme.

Signed:.....Date: .....

Please Print Name:

Appendix 18: Item-total correlations and Cronbach's alphas for the care worker and non-care worker sample

Taken and modified from SPSS v.18 output.

Item analysis for Inequality between People subscale (α = .742)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q3	.521	.691
Q5	.583	.655
Q21	.528	.687
Q32	.508	.698

Item analysis for Socially Desirable Responding subscale (α = .734)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q7	.520	.679
Q14	.492	.690
Q26	.453	.704
Q34	.468	.699
Q40	.546	.668

Item analysis for Trust in Human Nature subscale (α = .658)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q1	.393	.648
Q2	.499	.559
Q12	.382	.603
Q22	.443	.574
Q30	.423	.583

Item analysis for Hardheadedness subscale (α = .613)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q10	.508	.492
Q16	.432	.453
Q17	.426	.430
Q24	.462	.516
Q37	.497	.494

Item analysis for Manipulative subscale (α = .658)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q4	.466	.572
Q15	.341	.654
Q23	.505	.545
Q31	.447	.586

Item analysis for Cognitive Empathy – Perspective Taking subscale (α = .676)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q6	.396	.634
Q19	.480	.595
Q29	.389	.638
Q33	.349	.663
Q43	.533	.569

Item analysis for Modesty subscale (α = .659)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q8	.506	.559
Q9	.335	.643
Q20	.472	.581
Q27	.402	.612
Q38	.353	.633

Item analysis for Societal and Economic Equality subscale (α = .602)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q13	.407	.504
Q18	.288	.567
Q25	.354	.525
Q28	.278	.570
Q42	.429	.491

Item analysis for Emotional Empathy – Concern for Others subscale (α = .790)

Item number	Corrected item-total correlation	Cronbach's alpha in item removed
Q11	.515	.767
Q35	.573	.745
Q36	.668	.715
Q39	.457	.780
Q41	.627	.728

Appendix 19: Variables by level of measurement and codes

Variable	Level of Measurement	Value Codes
Outcome Variable – *Participation in Care Work*	Nominal	0 – Non-care worker 1 – Care worker
Sex	Nominal	0 – Male 1 – Female
Ethnic Group	Nominal	1 – White 2 – Asian 3 – Black 4 – Other
Religious	Nominal	0 – No 1 – Religious
In Relationship	Nominal	0 – Not in Relationship 1 – In Relationship
Have Children	Nominal	0 – No 1 – Yes
Provide Regular Unpaid Care	Nominal	0 – No 1 – Yes
UK born	Nominal	0 – No 1 – Yes
UK educated	Nominal	0 – No 1 – Yes
Age (years)	Interval	N/A
Educational level	Ordinal (low to high)	0 – None 1 – GCSE or equivalent 2 – A-level/IB or vocational equivalent 3 – Certificate in Higher Education of vocational equivalent (e.g. BTEC) 4 – Intermediate level Foundation Degree/Diploma in Higher Education 5 – Bachelor Degree/Graduate Diploma or vocational equivalent 6 – Masters Degree or Postgraduate vocational equivalent (e.g. PGCE) 7 – Doctorate Degree or vocational equivalent
SES – Mother's Main Occupation (SOC2000)	Ordinal (high to low)	1 – Managers and Senior Officials 2 – Professional Occupations 3 – Associate Professional and Technical Occupations 4 – Administrative and Secretarial Occupations 5 – Skilled Trade Occupations 6 – Personal Service Occupations 7 – Sales & Customer Service Occupations

		8 – Process, Plant and Machine Operatives 9 – Elementary Occupations
SES – Father's Main Occupation (SOC2000)	Ordinal (high to low)	1 – Managers and Senior Officials 2 – Professional Occupations 3 – Associate Professional and Technical Occupations 4 – Administrative and Secretarial Occupations 5 – Skilled Trade Occupations 6 – Personal Service Occupations 7 – Sales and Customer Service Occupations 8 – Process, Plant and Machine Operatives 9 – Elementary Occupations
Period in current job (years)	Interval	N/A
Number of Children	Interval	N/A
Age when first child born	Interval	N/A
Social Value Orientation (SVO)	Nominal	1 – Prosocial 2 – Individualistic 3 – Competitive
Inequality between People	Ordinal (low to high)	N/A
Socially Desirable Responding	Ordinal (low to high)	N/A
Trust in Human Nature	Ordinal (low to high)	N/A
Hardheadedness	Ordinal (low to high)	N/A
Cognitive Empathy - Perspective Taking	Ordinal (low to high)	N/A
Modesty	Ordinal (low to high)	N/A
Societal and Economic Equality	Ordinal (low to high)	N/A
Manipulative	Ordinal (low to high)	N/A
Emotional Empathy - Concern for Others	Ordinal (low to high)	N/A

Appendix 20: Collinearity diagnostic tests for predictor variables

Taken and modified from SPSS v.18 output.

Collinearity statistics (Tolerance & VIF) for all predictor variables included in the model.

Predictor Variable	Tolerance	VIF
A – Sex	.895	1.118
B - Age (Normal Score)	.627	1.595
C - Have Children	.676	1.480
D - Prosocial SVO	.923	1.084
E - Socially Desirable Responding	.783	1.277
F - Emotionally Empathy	.873	1.142
G - Hardheadedness	.860	1.163
H - Manipulative	.783	1.277

Collinearity statistics (Eigenvalue & Condition Index) for all predictor variables included in the model.

Dimension	Eigenvalue	Condition Index
1	6.804	1.000
2	1.308	2.281
3	.339	4.480
4	.232	5.418
5	.166	6.394
6	.073	9.625
7	.047	12.062
8	.025	16.519
9	.006	33.371

Variance proportions for all predictor variables included in the model

Dimension	Constant	A	B	C	D	E	F	G	H
1	0	0	0	0	0	0	0	0	0
2	0	0	**.33**	.10	0	0	0	0	0
3	0	0	**.56**	**.83**	0	0	0	0	.01
4	0	0	.02	.04	**.70**	0	0	.01	.07
5	0	**.57**	0	0	.13	.01	0	.01	.10
6	0	**.40**	.04	.03	.13	.24	.02	0	.29
7	0	0	.06	0	.01	.14	0	**.70**	.31
8	.03	.01	0	0	.03	**.55**	.32	.14	.06
9	.96	.01	0	0	0	.05	**.66**	.13	.16

Appendix 21a: Logistic Regression - Backward Likelihood Ratio

Taken and edited from SPSS v.18 output.

Outcome variable: Participation in care work
Predictor variables:
– Being female
– Having children
– Prosocial SVO
– Normalised Age
– Social desirable responding
– Manipulative
– Hardheadedness
– Emotional empathy

Model statistics at each step

Step	-2LL Constant: 247.873	Cox & Snell R^2	Nagelkerke R^2	Chi-square	df	Sig.
1	213.655	.174	.232	34.218	8	.000
2	214.144	.172	.229	33.729	7	.000
3	215.038	.168	.224	32.729	6	.000
4	216.153	.162	.217	31.835	5	.000
5	218.691	.150	.201	29.182	4	.000

Predictor variables at each step

STEP Predictors	*B*	Std Err	Wald	df	Sig.	Exp(B)	95% Confidence Intervals For Exp (B)
STEP 1							
Being female	1.325	.530	6.243	1	.012	3.762	1.331 – 10.635
Have children	.373	.426	.765	1	.382	1.452	.630 – 3.347
Prosocial SVO	.907	.415	4.763	1	.029	2.476	1.097 – 5.589
Age (normalised)	.218	.214	1.035	1	.309	1.244	.817 – 1.894
Socially Des Res	.042	.049	.714	1	.398	1.042	.947 – 1.148
Hardheadedness	-.097	.051	3.624	1	.057	.907	.821 – 1.003
Manipulative	-.069	.061	1.253	1	.263	.934	.828 – 1.053
Emotion Empathy	.047	.067	.488	1	.485	1.048	.919 – 1.194
Constant	-1.622	1.827	.788	1	.375	.197	
STEP 2							
Being female	1.341	.529	6.413	1	.011	3.833	1.354 – 10.789
Have children	.401	.424	.896	1	.344	1.493	.651 – 3.425
Prosocial SVO	.932	.412	5.104	1	.024	2.539	1.131 – 5.697
Age (normalised)	.213	.214	.997	1	.318	1.238	.814 – 1.881
Socially Des Res	.047	.048	.921	1	.337	1.048	.953 – 1.152
Hardheadedness	-.213	.051	3.673	1	.055	.906	.820 – 1.002
Manipulative	-.075	.061	1.500	1	.021	.928	.823 – 1.046
Constant	-.726	1.299	.313	1	.576	.484	

STEP 3							
Being female	1.317	.525	6.290	1	.012	3.732	1.333 – 10.443
Prosocial SVO	.958	.412	5.407	1	.020	2.607	1.162 – 5.846
Age (normalised)	.315	.186	2.874	1	.090	1.370	.952 – 1.972
Socially Des Res	.051	.048	1.106	1	.293	1.052	.957 – 1.156
Hardheadedness	-.098	.051	3.706	1	.054	.906	.820 – 1.002
Manipulative	-.079	.061	1.716	1	.190	.924	.820 – 1.040
Constant	-.612	1.286	.227	1	.634	.542	
STEP 4							
Being female	1.385	.517	7.174	1	.007	3.994	1.450 – 11.002
Prosocial SVO	.983	.411	5.730	1	.017	2.673	1.195 – 5.980
Age (normalised)	.365	.180	4.120	1	.042	1.440	1.013 – 2.048
Hardheadedness	-.102	.051	4.078	1	.043	.903	.818 – .997
Manipulative	-.093	.059	2.495	1	.114	.911	.811 – 1.023
Constant	.236	1.001	.056	1	.813	1.266	
STEP 5							
Being female	1.485	.507	8.578	1	.003	4.416	1.634 – 11.930
Prosocial SVO	1.098	.403	7.403	1	.007	2.998	1.359 – 6.611
Age (normalised)	.378	.178	4.522	1	.033	1.460	1.030 – 2.068
Hardheadedness	-.119	.049	5.812	1	.016	.888	1.030 – 2.068
Constant	-.482	.886	.296	1	.587	.618	.806 – 987

Appendix 21b: Female Matched Logistic Regression - Backward Likelihood Ratio

Taken and edited from SPSS v.18 output.

Outcome variable: Participation in care work
Predictor variables:
– Having children
– Prosocial SVO
– Normalised Age
– Social desirable responding
– Manipulative
– Hardheadedness
– Emotional empathy

Model statistics at each step

Step	-2LL Constant: 247.873	Cox & Snell R^2	Nagelkerke R^2	Chi-square	df	Sig.
1	183.554	.148	.197	23.963	7	.001
2	183.769	.146	.195	23.749	6	.001
3	184.192	.144	.192	23.325	5	.000
4	185.591	.136	.181	21.926	4	.000

Predictor variables at each step

STEP Predictors	*B*	Std Err	Wald	df	Sig.	Exp(B)	95% Confidence Intervals For Exp (B)
STEP 1							
Prosocial SVO	.763	.442	2.988	1	.084	2.146	.903 – 5.099
Have children	.295	.459	.413	1	.521	1.343	.546 – 3.302
Age (normalised)	.350	.229	2.329	1	.127	1.419	.905 – 2.224
Manipulative	-.076	.064	1.403	1	.236	.926	.816 – 1.051
Hardheadedness	-.110	.054	4.075	1	.044	.896	.805 – .997
Emotion Empathy	.077	.075	1.070	1	.301	1.081	.933 – 1.251
Socially Des Res	.025	.054	.215	1	.643	1.025	.923 – 1.139
Constant	-.285	1.969	.021	1	.885	.752	
STEP 2							
Prosocial SVO	.778	.440	3.120	1	.077	2.177	.918 – 5.160
Have children	.299	.459	.425	1	.515	1.349	.549 – 3.314
Age (normalised)	.370	.225	2.703	1	.100	1.448	.931 – 2.251
Manipulative	-.082	.063	1.663	1	.197	.922	.814 – 1.043
Hardheadedness	-.111	.054	4.222	1	.040	.895	.804 – .995
Emotion Empathy	.082	.074	1.218	1	.270	1.085	.938 – 1.256
Constant	.052	1.829	.001	1	.997	1.054	

STEP 3							
Prosocial SVO	.797	.440	3.285	1	.070	2.220	.937 – 5.258
Age (normalised)	.447	.193	5.356	1	.021	1.564	1.071 – 2.285
Manipulative	-.086	.063	1.863	1	.172	.918	.811 – 1.038
Hardheadedness	-.112	.054	4.266	1	.039	.894	.804 – .994
Emotion Empathy	.087	.074	1.387	1	.239	1.091	.944 – 1.261
Constant	.067	1.829	.001	1	.971	1.069	
STEP 4							
Prosocial SVO	.837	.434	3.716	1	.054	2.310	.986 – 5.413
Age (normalised)	.455	.192	5.596	1	.018	1.576	1.081 – 2.297
Manipulative	-.101	.062	2.665	1	.103	.904	.800 – 1.020
Hardheadedness	-.112	.054	4.325	1	.038	.894	.804 – .994
Constant	1.951	.921	4.485	1	.034	7.032	