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**Multiple veterinary stakeholders' perspectives  
on important professionalism attributes for  
career success in veterinary clinical practice**

**A thesis presented in partial fulfilment of the  
requirements for the degree of**

**Doctor of Philosophy  
in  
Veterinary Science**

**at Massey University, Manawatū, New Zealand**

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## **Abstract**

There is an increasing body of literature on professionalism in the health sciences. Most research has, however, elicited the opinions of single groups of experts and tried to use these to generalise across the profession. The aim of the thesis was, therefore, to gain a broad understanding of professionalism by appraising the voices of many tiers of veterinary stakeholders involved in veterinary clinical practice. Through a mixed methods approach using card-sort analysis, online questionnaires, focus groups, critical incident reporting and analysis of client complaints, information was collected from first year and final year Massey University veterinary students, clinical veterinary practitioners and veterinary clients. An online questionnaire was also used to gather the final year veterinary students' opinions on veterinary professionalism pedagogy.

The iterative sampling method ensured that a wide range of perceptions were represented. These multiple perspectives, along with the existing knowledge contained within the literature on veterinary and medical professionalism, provide the basis upon which to develop a theoretical framework on professionalism in the veterinary context. The synthesis of data into a framework was undertaken primarily through a grounded theory approach. The research also provides support for the importance of including professionalism in veterinary curricula.

Three overarching themes emerged from the analysis of the veterinary stakeholders' opinions, namely: 'committing to best practice', 'building the veterinarian-client relationship' and 'client expectations'. The framework of veterinary professionalism that has evolved from scrutiny of these themes revolves around the principles of 'veterinary care'. Career success and satisfaction for practising clinical veterinarians hinges on three crucial domains of veterinary care: 'patient-centred care', 'relationship-centred care', and 'self-care'. The focus of patient-centred care is the animal, while the foci of relationship-centred care are the client and veterinary colleagues. The self-care domain focuses on the practising veterinarian as a person. Professionalism, therefore, fundamentally revolves around veterinarians' accountability to a social contract with patients, clients and colleagues as well as to themselves.

Analysis of veterinary student opinions on the teaching of professionalism revealed constructive viewpoints and recommendations. Students recommended that the veterinary professionalism course be embedded across the whole primary veterinary teaching programme, including in the early years of study. It was further suggested that role-playing and reflective practice should be used throughout the programme to support the development of professionalism. The need to assess professionalism adequately and appropriately was also highlighted, as was the need to include rewards for displays of good professional behaviour. The potential for the hidden curriculum and negative clinical role models to undermine the teaching of professionalism was also addressed. Additionally, students recommended that the veterinary professionalism curriculum should prepare graduates for the job market by accommodating the requirements of veterinary employers.

This research represents the first time that the opinions of multiple veterinary stakeholders on the attributes of professionalism important for career success have been solicited in one series of research studies. Furthermore, this study has used novel methodologies to determine the opinions of stakeholders. For the first time, a card-sort analysis has been used to solicit veterinary students' opinions and the critical incident technique has been used to determine the perspectives of practising veterinarians. Analysing client complaints lodged with the Veterinary Council of New Zealand also represents an original method of determining those attributes of professionalism that will promote veterinary career success and satisfaction.

By seeking the perspectives of multiple veterinary stakeholders, the body of knowledge about professionalism has been extended. Furthermore, the neoteric framework of veterinary professionalism, developed in the study, could help to form the basis for constructing a robust curriculum prescribing the teaching and assessment of veterinary professionalism. It may also be used by veterinarians as a guide in the practice of veterinary medicine and in their relationships with patients, clients, colleagues and society.

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*Don't gain the world and lose your soul, wisdom is better than silver or gold*

*Bob Marley*





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## List of outputs arising from this body of work

### Publications:

**Gordon SJG, Gardner DH, Weston JF, Bolwell CF, Benschop J and Parkinson TJ.** Quantitative and thematic analysis of complaints by clients against clinical veterinary practitioners in New Zealand. *New Zealand Veterinary Journal* 67(3), 117-125, <https://doi.org/10.1080/00480169.2019.1585300>, 2019  
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### Conference presentations and proceedings:

**Gordon S, Gardner D, Weston J, Bolwell C, Parkinson T.** Using client complaints, lodged with the Veterinary Council against veterinarians to inform the teaching of essential professional skills in an undergraduate veterinary curriculum. *Proceedings of the Australian Veterinary Association conference (Education day)*, Melbourne, Australia, 8 June 2017

**Gordon S, Gardner D, Weston J, Bolwell C, Parkinson T.** First year Veterinary Student perceptions on the importance of professional skills to veterinary career success. *Proceedings of the VetSet2Go Employability Forum*, Gold Coast, Australia, February 2018

**Gordon S, Gardner D, Weston J, Bolwell C, Parkinson T.** Using client complaints, lodged with the Veterinary Council against veterinarians to inform the teaching of essential professional skills in an undergraduate veterinary curriculum. *Proceedings of the VetSet2Go Employability Forum*, Gold Coast, Australia, February 2018

**Gordon SJG, Cake M, Bell M, Cobb K, Mossop L, Meehan M, Hewson J, Tait J, Coe JB, Conlon PD.** Using final year international veterinary students' opinions to help inform veterinary professionalism training and curricula. *Proceedings of the VetEd Down Under Symposium*, Brisbane, Australia, February 2020



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Using complaints by clients against clinical veterinary practitioners in New Zealand to inform the teaching of essential professionalism attributes in an undergraduate veterinary curriculum. *Proceedings of the 36th World Veterinary Association Congress, Abstracts, Academic and Education*, April 2020

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# 1. Introduction

## 1.1. Background to research focus

Whilst veterinary curricula have traditionally focused on the teaching of clinical skills and content knowledge, a complete and holistic veterinary curriculum must incorporate a dedicated programme of instruction in non-technical skills (termed veterinary professionalism attributes in this thesis) throughout the degree. Current medical and veterinary education research has highlighted the importance of professionalism teaching in the career success of doctors and veterinarians (Arnold and Stern 2006; Root Kustritz and Nault 2010).

Veterinary education must continuously adapt to meet the demands of society and to ensure that new graduates are well suited for employment in their future roles (Mossop 2012a). The inclusion of veterinary professionalism in the undergraduate veterinary curriculum is vital in order to improve graduates' employability and to prepare them for the constantly changing professional work environment (May 2008; Armitage-Chan *et al.* 2016). Professionalism instruction must include explicit teaching of the appropriate attitudes and behaviours expected of practising veterinarians (Mossop 2012a). Hossain *et al.* (2020) demonstrated that both professionalism skills and technical skills were positively related to employability. Veterinary undergraduate teaching not only needs to meet the demands of a rapidly changing work environment but must also be held accountable for the increasing cost of education, coupled with increasing competition for jobs (Farias 2016). The responsibility of curricula and instruction in tertiary institutions should be to help students "*learn how to learn and how to become employable*" (Evers *et al.* 1998 p 12). The American Council on Education (ACE) has stated that tertiary institutions need to assume responsibility for building a nation of learners to "*secure and maintain a workforce and compete globally*" (ACE 2003 p 11). Furthermore, there is an inherent expectation that this learning will also occur when veterinary students are exposed to the professional workplace when they observe clinical practice during their external veterinary practice placements (Mossop 2012a).

In 2013, a new veterinary undergraduate curriculum was introduced at Massey University in New Zealand. As the recently appointed Co-ordinator of Veterinary Professionalism Studies, the candidate's responsibilities included the development and supervision of a veterinary professionalism curriculum that spanned all five years of the BVSc programme. To help inform the content of this programme, an extensive literature search on medical and veterinary professionalism was conducted. Consultation with colleagues holding a similar job portfolio at other veterinary schools (mainly in Australia and the United Kingdom) also provided valuable insights. The review also involved an evaluation of the opinions of veterinary stakeholders in New Zealand regarding those veterinary professionalism attributes that they deemed essential for career success. Seeking the opinion of these stakeholders formed the basis of this PhD study. Stakeholders' opinions on the professionalism attributes specifically relevant to clinical practice were regarded as particularly important, as the currently accepted veterinary education model dictates that new veterinary graduates should be proficient in Day-One skills in general clinical practice. This feedback was, therefore, regarded as essential to help assess the relevance of the current veterinary professionalism curriculum and to make any modifications deemed necessary.

This review required the establishment of a realistic and usable definition of veterinary professionalism, to facilitate the teaching and assessment of these values within the curriculum. A definition of veterinary professionalism that can inform teaching and assessment would help in the management of a constantly evolving veterinary curriculum and would help to inform the content of continuing education courses on veterinary professionalism offered after graduation (Mossop 2012b).

### **1.2. Developing the research question**

As the literature review chapter (Chapter 2) will demonstrate, a rich body of knowledge exists on professionalism in the medical sciences. There is, however, a lack of focus on the perceptions of veterinary students, practising veterinary clinicians and veterinary clients as to what professionalism attributes are

important for veterinary career success. Furthermore, many previous research methodologies to elicit the perspectives of veterinary stakeholders have involved only face-to-face interviews. While interviews are commonly used in qualitative research to allow participants to offer their opinions, perspectives and experiences to the researcher, often no consideration is made of the social implications of the interview process (DiCicco-Bloom and Crabtree 2006). The interview represents a collaborative process between the interviewer and interviewee, but often the interviewer adopts a dominant position that may influence the process. Interviewees may be affected by the inherent power structure and may feel compelled to provide the answers which they feel the interviewer wants (Mossop 2012a). Considering this, the current series of studies employed a range of methodologies to elicit the perspectives and opinions of the various stakeholders.

The **primary research question** developed was:

What attributes of veterinary professionalism do various veterinary stakeholder groups regard as important for career success as a clinical practitioner?

The focus of this research, therefore, was to determine veterinary stakeholders' opinions on important veterinary professionalism attributes for career success in veterinary clinical practice. Opinions were solicited from four different categories of stakeholders: first year veterinary students; final year veterinary students; veterinary clinical practitioners; and clients attending clinical veterinary practices. The findings from this research will help to determine those veterinary professionalism attributes which, when demonstrated by veterinarians, could contribute to a happy and fulfilling career as a veterinary clinical practitioner. It will also provide useful information to help shape future professionalism training programmes in the veterinary undergraduate curriculum in the School of Veterinary Science at Massey University.

In order to be able to answer the primary research question, four **specific research questions** were developed. An extra research question was developed to allow exploration of final year veterinary student opinion on the suitability of the

current veterinary professionalism educational programme in the primary veterinary curriculum:

1. What are the perceptions of first year veterinary science students regarding professionalism attributes important to veterinary career success in future clinical practice?
2. What are the perceptions of final year veterinary science students regarding professionalism attributes important to career success in veterinary clinical practice?
3. What are the opinions of final year veterinary science students on the suitability of the current veterinary professionalism educational programme in the primary veterinary curriculum?
4. What are the perspectives of practising clinical veterinarians regarding veterinary professionalism attributes important for continuing career success as clinical practitioners?
5. What are client perceptions, based on the nature of veterinary complaints lodged by clients with the Veterinary Council of New Zealand against veterinarians, regarding important veterinary professionalism attributes for veterinary clinical practitioners?

These research questions do not lend themselves easily to the creation of a hypothesis to be proved or disproved. Instead, this is a broad social study seeking to elicit the opinions from a wide range of stakeholders. The goals of this study were best achieved through a mixed methods research approach.

The aim was to elicit the opinions of each stakeholder group using a range of methodologies. The quantitative data collection methods used in this research included a card-sort analysis to determine the opinions of first year veterinary students and a survey instrument to solicit the opinions of final year veterinary students. These data were described statistically as summary measures of

frequencies and central tendency and were stratified according to the gender, age and ethnic background of the respondents.

The qualitative data collection methods employed were final year veterinary student focus groups, critical incident narratives of veterinary clinical practitioners and complaints data lodged by clients against veterinarians. Thematic analysis was used to conduct an exploratory analysis of these data and to generate and construct a theoretical framework from the data (Allen 2014). The qualitative research component represented a way to *“study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them”* (Denzin and Lincoln 2005 p 3)

### **1.3. Structure of the thesis**

The chapters in this thesis have three major goals:

1. To review previous and current literature on professionalism from a variety of veterinary and medical science disciplines and applied fields.
2. To use mixed methods research, from a critical realist, social constructivist/ interpretivist and constructionist theoretical perspective, as an effective strategy to produce reliable, valid and credible answers to the research questions.
3. To generate results that represent an accurate and faithful interpretation of all the study participants' voices during the process of data reduction.

In order to achieve these goals, Chapter 2 is presented as a literature review analysing professionalism attributes and employability as they relate to medical and veterinary disciplines. It also explores recent research in veterinary professionalism undergraduate curriculum development.

Chapter 3 introduces the mixed methods research design. The strategies (or theoretical underpinnings) of the qualitative enquiry are explored and the main methods of data analysis discussed. Risks to the validity and reliability of the research are considered, with details provided on how these risks have been

minimised. Details of the methodology used in each of the four studies are not, however, discussed in this chapter but are instead presented in each of the relevant chapters along with the research findings.

Within Chapters 4, 5, 6 and 7, the methods sections explain procedures of data collection and analysis and explore strategies designed to reduce bias and ensure validity and reliability. In Chapter 4, the results section provides descriptive statistics and inferential statistical analysis of first year veterinary student card-sort responses. Chapter 5 provides descriptive statistics and inferential statistical analysis of final year veterinary student survey responses and provides quotes from the students' open-ended question survey responses. This chapter also presents quotes from the focus groups to substantiate codes, minor themes, major themes and other issues emerging from the data. Chapter 6 and Chapter 7 present the analysis and supporting quotes from the veterinary practitioners' critical incidents narratives and the clients' complaints respectively, to also substantiate the codes and themes and other issues that emerge.

The final chapter (Chapter 8) represents the discussion and reviews the major themes and trends that have emerged from the overall data analysis across all veterinary stakeholders. It then weaves these factors into a theoretical framework, grounded in the data, to help explain factors that determine veterinary career success. The chapter also reviews the final year student feedback and offers critical points to consider when developing future veterinary professionalism curricula for primary veterinary qualifications. The chapter concludes with personal reflections on the strengths and limitations of the research and contemplates the direction of future research.

## 2. Literature review

### 2.1. Introduction

Veterinary graduates studied by Lewis and Klausner (2003) claimed that they lacked the non-technical skills and professional attitudes (collectively referred to as veterinary professionalism attributes in this thesis) required to address the existing and predicted challenges within the veterinary profession and the constantly changing professional work environment. More specifically, these graduates felt unprepared for the management and communication requirements of veterinary practice. This situation had arisen because veterinary educators had tacitly assumed that students would acquire veterinary professionalism attributes passively in the course of their content-heavy clinical curriculum (Zenner *et al.* 2005). Veterinary schools had assumed little responsibility for veterinary professionalism instruction, presuming that the students' social interaction with clinical staff, classmates, veterinary practitioners and family members would suffice (Hess-Holden *et al.* 2019).

It is now evident that veterinary schools must assume a significant level of responsibility for providing a primary veterinary qualification aimed at developing the attributes of veterinary professionalism that are associated with veterinary career success (Lewis and Klausner 2003). In today's increasingly diverse society, veterinary curricula need to develop and maintain programmes that focus on communication skills, emotional intelligence, cultural awareness, team-work abilities, dispute resolution strategies and the awareness that multiple approaches may be required to resolve challenges (Veterinary Leadership Institute Board of Directors, *personal communication*, 1 July 2019). Failure to do so clearly results in veterinary graduates entering the workforce without the interpersonal and coping skills that are necessary to succeed in clinical practice. There is compelling evidence that failing to do so materially increases the risk of veterinarians developing burnout, compassion fatigue, and mental health concerns (Rollin 2011; Nett *et al.* 2015; Hess-Holden *et al.* 2019).



There is an increasing volume and quality of literature on professionalism in the context of medical and veterinary practitioners: a literature which is, however, made complicated by the plethora of terms, such as ‘veterinary professionalism’, ‘veterinary professional skills’, ‘veterinary professional competence’ and ‘veterinary professional attributes’, that encompass this skill-set. However, there is a progressively developing consensus in the literature on those attributes of veterinary professionalism that are important for career success and for employability. Consideration of the issues related to the teaching and assessment of veterinary professionalism is less fully represented in the literature, but, again, consensus is starting to emerge. These themes will be explored in this review of the literature.

### **2.2. Definitions of professionalism**

Professionalism has been described as an intangible concept that has not lent itself easily to definition (Bryden *et al.* 2010). Nonetheless, by attempting to define professionalism, a set of appropriate behaviours or attributes have been established on which the role and scope of the profession could be based (Mossop 2012b). Furthermore, a clear definition of veterinary professionalism would allow educators to take an evidence-based appraisal of appropriate attributes of professionalism to include in a primary veterinary qualification (Mossop 2012b). This definition could also allow educators to recognise examples of poor professionalism and correct them before the student graduates as a veterinarian (Mossop 2012b).

It is important to achieve some form of consensus on veterinary professionalism so that faculty educators can interpret it in the same manner. To help determine curriculum content, a universally acceptable definition of professionalism would need to be determined. By necessity, this definition would have to be simple and straightforward to ensure that the teaching of professionalism was pragmatic, achievable and easy to assess (Mossop 2012b). O’Sullivan *et al.* (2012) argued, however, that pinning down a universal understanding to agree on a common definition of professionalism was unrealistic. Instead, they recommended that a

definition acceptable to each institution was preferable, accompanied by the setting of appropriate learning outcomes (O'Sullivan *et al.* 2012).

### **2.2.1. Early attempts at defining professionalism**

Attempts to define veterinary professionalism were first made in the late 1990s. However, these early definitions failed to consider the values and beliefs that veterinarians should possess and failed to acknowledge the profession's social contract (Brown and Silverman 1999; Cron *et al.* 2000a). Instead, early definitions were concerned with how the profession could survive the prevailing economic challenges and increase its revenue base (Brown and Silverman 1999; Cron *et al.* 2000a). It has now been recognised, however, that critical skills such as integrity, innovation, emotional intelligence, leadership and motivation need to be emphasised, so that the profession can better serve society, rather than just achieving financial success (Mossop 2012b).

### **2.2.2. Professionalism as a list of traits**

Various medical and veterinary researchers have tried to identify the specific components of professionalism. Since veterinarians need to balance the demands of satisfying the expectations of clients, society, and employers, whilst also considering the requirements of the patients in their care, Mossop (2012a) asserted that the attributes of communication skills, confidence, honesty, altruism, empathy, autonomy, decision-making, and acknowledgement of limitations would cater for these competing demands.

Lewis and Klausner (2003) identified further challenges faced by veterinarians, including keeping current within a rapidly changing profession, achieving a work-life balance while focusing on career goals, obtaining both business and political acumen, and assessing the needs of clients and other stakeholders and keeping them satisfied. These authors suggested that veterinarians should gain proficiency in the following skills to cope successfully with these key career challenges: sound business management skills (including budgeting and marketing); management skills (including delegating and directing others,

managing conflict and giving feedback); and communication skills (including reflective listening and appropriate non-verbal behaviour).

The American Board of Internal Medicine (ABIM 2002) compiled a list of essential attributes and behaviours that they felt were necessary to include in a definition of professionalism. This list included altruism, humanism, accountability and a commitment to lifelong learning (Swick *et al.* 1999; Mossop 2012b). Wear and Castellani (2000) described six elements of professionalism: accountability, altruism, duty, excellence, honour and integrity, and respect for others; although they acknowledged that professional development in the primary qualification should also include more practical aspects such as career planning and *curriculum vitae* construction.

Mossop (2012a) applied a constructivist grounded theory methodology to create a definition of veterinary professionalism. Through semi-structured in-depth individual interviews and focus groups, veterinarians, veterinary nurses, clients and representatives from the veterinary professional association in the United Kingdom were asked to describe those aspects which made a veterinarian “good” or “bad”. Those veterinary stakeholders were also asked to describe what they understood by the term ‘veterinary professionalism’ (Mossop 2012a). A model for understanding veterinary professionalism was derived from these data, which promoted the concept of ‘balance’ supported by a series of ‘attributes’ (Mossop 2012a). These attributes included caring and empathy, honesty and trust, altruism, personal efficiency, communication skills, problem-solving, decision-making, self-confidence, self-regulation, knowing one’s limits and maintaining technical competency. Reflective practice, while not recognised as a stand-alone attribute, was identified as an underlying attribute that enabled other more recognisable attributes. It was argued that the use of these attributes to balance the interests of the client, the patient, the practice and the wider veterinary profession represented the core of professionalism (Mossop 2012a).

Tinga *et al.* (2001) described how a professional skill set, based on intrapersonal and interpersonal skills (including communication skills and recognition of the human-animal bond) are now deemed as essential to meet the demands of

employers and clients. When describing the characteristics of a successful veterinarian, new graduates ranked interpersonal skills and communication skills higher than a sound knowledge of veterinary sciences or even accurate diagnostic skills (Tinga *et al.* 2001). In a study conducted by Doucet and Vrin (2009), veterinary professionals identified professional activities such as communication skills, critical judgement and decision-making, team work, managing financial resources, knowing one's strengths and limitations, managing interpersonal conflicts, the ability to work independently and under pressure, compassion and empathy for clients and animal owners, and demonstrating honesty, integrity and ethical behaviour, as important for career success.

In addition, Collins and Taylor (2002) and Lewis and Klausner (2003) identified the following professional behaviours as central to success as a veterinarian:

- Building relationships and establishing connections and rapport with others by seeking their opinions and input and valuing their perspectives;
- Being able to take charge when circumstances dictate and being able to make difficult decisions;
- Demonstrating self-management by setting goals and remaining focused on achieving them despite distractions and obstacles or challenges;
- Showing good organisational ability and managing multiple demands and competing priorities;
- Demonstrating integrity through acting in a manner consistent with the principle of the veterinary profession, building trust with others through daily actions, making principled decisions, treating others with respect;
- Demonstrating continued learning through keeping current on developments in veterinary medicine and expanding one's knowledge base and clinical skills through continuous professional education;
- Demonstrating resilience and adaptability through responding to competing demands, change or ambiguity, and adversity with a positive and optimistic disposition;
- Displaying effective communication through practising good listening skills, remaining attentive to others, displaying empathy to clients and

colleagues, explaining and writing things clearly and creating an atmosphere where others feel comfortable speaking;

- Demonstrating leadership qualities through motivating and directing the activities of others and by empowering others to achieve their own personal goals;
- Teaching or coaching others through guiding them to higher performance and giving accurate and timely feedback;
- Showing business acumen by making use of the best resources to meet the goals of the veterinary practice or organisation;
- Making sound decisions based on evidence, logic, experience and best practice;
- Thinking creatively, showing innovation through exploring new ideas and approaches to problems and challenges;
- Recognising and complying with ethical professional standards in relation to the code of professional conduct and understanding of legal obligations to community health

(modified from Appendix 4, Lewis and Klausner 2003 p 1696).

Hilton and Southgate (2007) defined domains of professionalism that included ethical practice, reflection and self-awareness, responsibility/accountability for actions (commitment to excellence/lifelong learning/critical reasoning), respect for clients and patients, working with others (teamwork) and social responsibility. Similarly, Askarian *et al.* (2015) mentioned the importance of veterinary professionals displaying honour, excellence, integrity, duty, accountability, altruism, and respect for others, whilst Miller *et al.* (2004) included self-discipline/self-management, a positive attitude, and appropriate attire (including acceptable personal hygiene) to the list of essential professionalism attributes.

The meta-analysis of Cake *et al.* (2016) marked the first systematic review of evidence to support the inclusion of veterinary professionalism instruction in veterinary primary qualifications. Professional behaviour and communication skills were the two competencies that were explicitly stated as important throughout the published literature. Attributes such as emotional intelligence, self-

awareness and self-confidence were, however, only sparsely represented in the literature. In addition, cultural competency, information technology, health and welfare advocacy, and leadership were perceived to hold little importance for veterinary graduates. Interestingly, communication skills were perceived to be important by veterinarians and employers but less so by clients (Cake *et al.* 2016).

Business skills occupy an equivocal place in the literature. For example, Cake *et al.* (2013) found that the inclusion of business skills within veterinary professionalism competency frameworks was associated with improved employability, income and employer satisfaction, although, perhaps paradoxically, they also found that veterinary students, new graduates, experienced practitioners and clients considered business skills less important than other competencies (Cake *et al.* 2013). Heath and Mills (1999) reported that veterinary employers regarded financial and practice management knowledge as essential attributes for new veterinary graduates, and Bachynskey *et al.* (2013) found that new veterinary graduates described dealing with the financial aspects of practice as a significant problem during their transition to work.

While all the findings discussed above would help to inform the development of a professionalism curriculum within a primary veterinary qualification, Nielson (2001) warned that updating the curriculum based only on lists of veterinary professionalism attributes would prove insufficient in equipping new veterinary graduates with the necessary skills required for career success. The changing role and scope of the profession needs to be accounted for when considering curricula updates with a more global approach that includes a focus on risk assessments and population health (Hird *et al.* 2002).

### **2.2.3. Professionalism as a social construct**

Recent thinking emphasises that the construct of professionalism had become too nuanced and complex to be regarded as a simple checklist of appropriate attitudes, behaviours and appearances (Martimianakis *et al.* 2009; Mossop 2012b). While a checklist-based definition might serve as a useful tool to

determine the appropriate behaviours and attitudes required by a veterinarian, further discussion would be needed around the role of health care professionals in today's complex society (Mossop 2012b). The study conducted by Jha *et al.* (2015), is interesting in this regard. In that study, patients regarded the physician-patient relationship as a key component of professionalism. In other words, in order to address the importance of the medical practitioner-client/patient relationship, the definition of professionalism would need to expand from an individual perspective to a more public or social concept (Hafferty and Castellani 2010).

It has also been argued that the components of professionalism are heavily influenced by the culture in which they are created (Eraut 2000). There is, however, little consensus on a culturally appropriate definition of veterinary professionalism (O'Sullivan *et al.* 2012). Indeed, Hafferty and Castellani (2009 p 827) considered that: "*What it means to be a professional clearly differs along socio-cultural and political fault lines*". Such a view makes it difficult to enunciate the values and behaviours expected of veterinary professionals (Mossop 2012b). The nature of professionalism should, therefore, be regarded as context specific and the development of professionalism should be addressed as a dynamic judgement and not as a discrete skill set (Opperman 2014). By focusing only on normative definitions of professionalism, there would be an over-reliance on codes of behaviour and professional conduct, and this could miss the influences of economic, political and contextual concerns on social expectations (Hafferty 2006). To present the true nature of professionalism, social, political and economic dimensions should, therefore, be incorporated into the definition (Martimianakis *et al.* 2009). In addition, attributes such as altruism, honesty, integrity and adherence to codes of moral conduct should occupy a central role in definitions of professionalism in recognition of the privilege of self-regulation conferred by society on professionals (Martimianakis *et al.* 2009).

Professionalism has clearly become a value-laden term infused with social, historical and contextual expectations (Martimianakis *et al.* 2009). It has become essential in veterinary education, therefore, to ensure that professionalism is not

diminished into lists of professionalism techniques within a curriculum (Anijar 2004).

#### **2.2.4. A working definition of professionalism**

For the purpose of this thesis, an amalgamation of the pre-existing definitions of professionalism has been crafted based largely on the definitions constructed by the American Board of Internal Medicine (ABIM 2002) and the Accreditation Council for Graduate Medical Education (ACGME 2018):

*Professionalism represents veterinarians' commitment to professional responsibilities, ethical principles and sensitivity to diverse individuals and populations, whose care has been entrusted to them. This commitment must be enacted with respect, compassion and integrity prioritising the interests of those they serve above their own.*

Adopting a definition of professionalism that accounts for the culture and values of the institution in which it is to be applied, can help to form the basis of a sound framework for teaching and assessing veterinary professionalism.

### **2.3. Professionalism, professional skills, professional competence and professional attributes**

It is important to distinguish between professionalism and professional skills when considering a primary veterinary qualification. Professional skills include competencies in communication, business, wellbeing and governance, while professionalism includes displaying the appropriate behaviours and attitudes inherent within the profession (Mossop and Cobb 2013). The term professionalism aligns with Bloom's taxonomy of the affective domain, which considers emotional responses such as feelings, attitudes, values and motivations. Affective objectives target qualities of character and conscience (O'Neill and Murphy 2010). Professionalism could, therefore, be characterised as the internalisation of ethical, moral, altruistic and empathetic attitudes, behaviours and values required of veterinarians while ensuring competent and compassionate patient-centred care (Cruess and Cruess 2006). The teaching of



professionalism could, therefore, be regarded as a means of character formation (Wasserstein *et al.* 2007).

Professionalism has been presented by some authors as a theoretical construct described in abstract and idealistic terms. These terms mirror character traits (e.g. altruism, honesty, integrity) rather than directly observable behaviours (O'Sullivan *et al.* 2012). These terms would, however, be difficult to translate into measurable learning outcomes, as they are insufficiently concrete or specific (O'Sullivan *et al.* 2012). Many aspects of professionalism relate to internal attitudes and values and can only be interpolated, rather than measured, from complex behaviours (Cake *et al.* 2019). Hence, van Mook *et al.* (2009a) moved to frame professionalism as containing more tangible and observable behaviours which allowed norms and values to be visualised. The teaching of more tangible professional skills (e.g. communication skills, problem-solving, teamwork) could serve as a scaffold for students' understanding of professionalism.

Many authors (Nestel *et al.* 2011; Hodgson *et al.* 2013; Cake *et al.* 2016) suggested that the term professional skills (or non-technical skills) was misleading and terms such as 'professional competencies' or 'professional attributes' should instead be adopted. Arguments for the use of the term 'competencies' rather than 'skills' can be found in many works. For example, Atwell (1990 p 433) described the term competence as evoking an image of "*expertise, mastery, and excellence*". Epstein and Hundert (2002) have referred to professional competence as a term which embraces both professionalism and professional skills and described professional competence as the judicious and habitual use of communication skills, clinical reasoning, values, emotions and reflection for the benefit of the community being served. Norman (2016) defined professional competency as a multi-dimensional concept that included the cognitive, social and functional skills required for occupational success. Professional competency should certainly extend beyond traditional medical and surgical disciplinary knowledge and technical/psychomotor skills. A taxonomy of veterinary professional competencies was devised by Cake *et al.* (2016) and included the domains of interpersonal and communication skills, professionalism, systems-based practice, interprofessional collaboration and personal and

professional development. These authors emphasised the overlap or interconnectedness between each domain and highlighted the point that veterinary professional competencies should not be considered as separate and independent entities (Cake *et al.* 2016).

Norman (2016) pointed out the importance of context when considering competencies. Often the same occupation could demand different competencies in different work environments. Competencies seem to be related to the nature and complexities of the activities undertaken and the interpersonal dynamics between parties (Lingard 2012). Competencies are not, therefore, necessarily generalisable, and a list of competencies observed out of context might not define an occupation. Furthermore, a list of competencies might not automatically be generalisable to all work environments within the same occupation (Norris 1991; Govaerts 2008).

When referring to professionalism, the meaning of the terms competencies and attributes has also been contested. Willcoxson *et al.* (2010 p 66) refers to: “*The muddied waters of competencies and attributes*”. Both terms could be used as synonyms for professional skills, generic skills, core skills, employability skills, graduate capabilities or even graduate outcomes (Willcoxson *et al.* 2010). Traditionally, however, competencies have been associated with the requirements of professional bodies or vocational training. In contrast, attributes (or capabilities or outcomes) have been associated with tertiary education (Willcoxson *et al.* 2010)

Despite these contradictions, if the teaching of veterinary professionalism at tertiary institutions is to be improved, a universal term should be adopted that embraces all the arguments presented. In the remainder of this thesis both veterinary professional skills and professional competencies will be described as professionalism attributes (all falling under the umbrella of ‘veterinary professionalism’).

## 2.4. Definition of veterinary career success

The current research hinges on determining veterinary professionalism attributes that have been regarded by various veterinary stakeholders as important for career success. In order to provide context for this research, it is important to first explore the concept of career success.

Wnuk and Amundson (2003 p 274) defined a career as: *“the evolving sequence of a person’s work experiences over time”*, and they defined career success as *“the attainment of goals that are personally meaningful to the individual”*. They considered the subjective concepts of career success such as employee satisfaction and workplace collegiality. While previous definitions of career success have concentrated on an employee’s promotion history within an institution, veterinary career success has been described by Cake *et al.* (2016) as any favourable professional or personal outcome that has been influenced by veterinary employment. Prior studies have identified factors that motivate and satisfy veterinarians and contribute towards career success, including intellectual challenges, job variety, helping clients, helping animals and workplace collegiality (Figley and Roop 2006; Robinson and Hooker 2006; Shibly *et al.* 2014; Cake *et al.* 2015). Most veterinarians do not appear to be primarily motivated by status or financial reward (Cron *et al.* 2000b; Heath 2002) although, in a study conducted in the United Kingdom by Robinson and Hooker (2006), 14% of veterinarians did cite status as an important motivating factor. Similarly, new graduates in the United States of America described the honour and respect accorded to veterinarians as a significant motivating factor (Brown and Silverman 1999). Medical students cited good relationships and communication with patients, having an opportunity for professional growth, leading a balanced life, intellectual stimulation and professional status or esteem as motivating factors (Hoff *et al.* 2002; Reed *et al.* 2004).

Lewis and Klausner (2003) identified several outcomes that could act as measures of career success and personal fulfilment. These included gaining personal job fulfilment, gaining professional recognition and respect, contributing to the welfare of stakeholders within the profession, achieving a balance between

community, professional, family and spiritual obligations (i.e. maintaining an optimum work-life balance), achieving personal goals and ensuring an adequate and sustainable level of compensation. Cake *et al.* (2018) further identified competencies that are relevant to graduate success:

- Displaying empathy and recognising the human-animal bond. These were associated with increased veterinarian and client satisfaction;
- Adopting a relationship-centred care approach. This was associated with increased client satisfaction and improved client adherence;
- Possessing self-confidence and self-efficacy. This was associated with increased veterinarian satisfaction, improved income and enhanced work engagement;
- Demonstrating sound business skills. This was associated with increased income and increased employer satisfaction.

In contrast to these findings, the meta-analysis conducted by Cake *et al.* (2016) concluded that the acquisition of veterinary professionalism attributes had few associations with any tangible measure of veterinary career success. This meta-analysis exposed a scarcity of good quality evidence-based research within the veterinary profession to support the link between most professionalism attributes and career success. Most of the literature reported the subjective perceptions of stakeholders rather than “*empirical associations with defined outcomes*” (Cake *et al.* 2016 p 9). These authors admitted, however, that stakeholder perceptions could influence outcomes and could still provide indirect evidence for the importance of professionalism attributes for career success. While no evidence was found to support the anecdotal claims that poor communication skills were frequent causes of malpractice complaints, communication was the only attribute identified for which there was sufficient evidence-based support for it to be classified as a professionalism attribute important to veterinary career success (Cake *et al.* 2016).

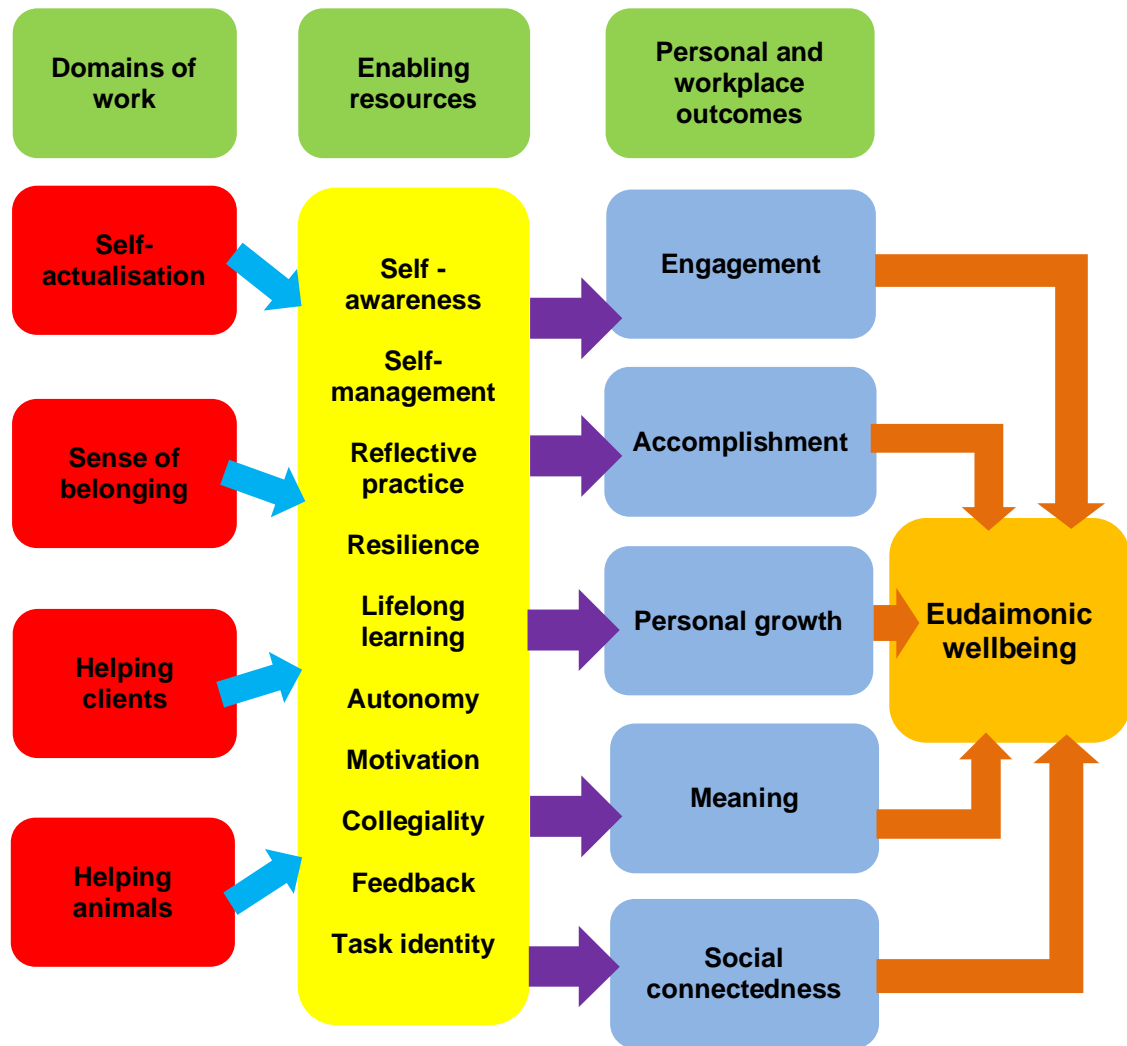
The importance of resilience and work-life balance to career success was discussed by Meehan and Bradley (2007) and Bartram and Baldwin (2007), who found that veterinarians were at a greater risk of deteriorating mental health

issues when working excessive hours. To protect from burnout when facing arduous working conditions, Mastenbroek *et al.* (2013; 2014) cited the benefits of engaging personal resources such as reflective practice, self-confidence and optimism. Resilience was identified as an important attribute in the meta-analysis of Cake *et al.* (2016) but lacked a strong evidence-based link to graduate outcomes.

Cake *et al.* (2015) devised a model of the positive job elements that contributed to eudaimonic wellbeing in veterinary work using Warr's nine key workplace happiness characteristics (Warr 2007) and the five dimensions identified in the Job Diagnostic Survey Instrument created by Hackman and Oldham (1975). Warr's nine key happiness workplace characteristics are shown in Table 2.A. Eudaimonic wellbeing in the veterinary context means to flourish and prosper in the work environment. Cake *et al.* (2015) claimed that positive contributions and enabling eudaimonic resources could provide useful indicators of what instruction to offer in primary veterinary qualifications to ensure future graduate wellbeing and resilience. A modified version of this model is presented in Figure 2.A.

**Table 2.A:** The nine key workplace happiness characteristics (Warr 2007).

<b>Nine characteristics affecting happiness in the workplace</b>
The ability to work autonomously
The opportunity to use and develop skills
Goals and roles expected of the job clearly outlined
Variety of tasks available
Performance requirements outlined with constructive feedback
Social support and contacts available
Financial incentives offered
Physical comfort and security offered
Position and status offered



**Figure 2.A:** A model of the positive contributions to eudaimonic wellbeing from veterinary work (modified from Hackman and Oldham 1975, Warr 2007 and Cake *et al.* 2015).

Shibly *et al.* (2014) reported that the variability and challenges of the job, life-long learning opportunities and interacting with clients and colleagues were important determinants of job satisfaction amongst veterinary faculty in an Austrian veterinary school. Evidence also exists to show that displays of empathy towards the client helped to increase veterinary job satisfaction (Thomas *et al.* 2007; Shaw *et al.* 2012) through providing a sense of purpose and meaning in life. Professionals who regarded their work as a vocation reported significantly higher job satisfaction than those who described their work as a career or a job (Wrzesniewski *et al.* 1997). Veterinarians benefit from a caregiving role that involves both humans and animals, which may explain why veterinarians

sometimes show better job satisfaction than other health professionals (Cake *et al.* 2015).

Finally, it is worth mentioning the work of Gruzdev (2018) who extended the definition of career success to include success in family affairs and other social spheres. By this definition, graduates need additional attributes to attain career success. These include showing initiative and independent thought, demonstrating computer literacy, gaining proficiency in the art of conversation, showing tolerance and willingness to embrace diverse people and ideas, the ability to resolve conflicts successfully and a desire for life-long learning (Gruzdev 2018).

### **2.5. Veterinary employability**

Concern has been expressed that the prevailing paradigms of veterinary professionalism (i.e. professional skills, professional competencies, professionalism attributes) are inadequate to represent all dimensions of a successful veterinarian. Thus, Cake *et al.* (2018) felt that the use of the term 'employability' presented a more realistic and representative paradigmatic framework to address satisfaction and success in veterinary employment. They also felt that, unlike the paradigms of professionalism, employability includes the veterinarian (i.e. self) as an important stakeholder. Since professionalism is orientated towards accountability to a social contract with clients, stakeholders and society, the capacity to recognise personal and professional limitations is paramount. In contrast, employability is more concerned with the recognition of personal and professional strengths and considers the needs and desires of veterinarians themselves (Bell *et al.* 2018; Cake *et al.* 2019). Employability skills should, therefore, comprise both people skills and personal attributes (Robles 2012); focusing attention on attributes such as self-awareness, self-confidence, wellbeing and resilience, whilst not forgetting interpersonal skills such as communication, critical thinking, problem-solving and teamwork (Farias 2016).

Four key aspects of employability have been recognised by Hillage and Pollard (1998):

- The assets of employees: their knowledge, skills and attitudes;
- The deployment of employees: their career management skills such as self-awareness, decision-making and their ability to adapt to changes within an ever-changing job market;
- The presentation of employees: their ability to demonstrate assets and abilities in order to convey their suitability for a position;
- The personal circumstances of employees: their personal responsibilities and obligations (e.g. family) which may affect successful acquisition of employment.

Another taxonomy of employability was outlined by Holmes (2013) who described employability as:

- a set of assets, in terms of employee characteristics and skills;
- a strategic action of sociocultural positioning and professional enculturation;
- a dynamic relationship between an employee and employer.

This implies that the term employability acknowledges the expectation that veterinarians will be able to navigate the requirements of multiple stakeholders including employers, clients, work colleagues, industry and veterinary statutory bodies. According to Cake *et al.* (2018), the use of the term employability as a paradigmatic framework has the capacity to satisfy all veterinary stakeholders' needs in a sustainable way.

Various authors have attempted to define employability. Hillage and Pollard (1998 p 1) presented a simple description: "*Employability is about having the capacity to gain initial employment, maintain employment and obtain new employment if required.*" However, this definition can be expanded beyond the ability to simply gain and maintain employment towards a more complex concept that includes the social processes and personal attributes that enable job success



and satisfaction. Thus, Dacre Pool and Sewell (2007 p 280) defined employability as: *“...a set of skills, knowledge, understanding and personal attributes that makes a person more likely to choose and secure occupations in which they can be satisfied and successful.”* Similarly, Cake *et al.* (2018 p 6) noted that, while the term employability suggested the ability to achieve employment, it should equally relate to the capacity to productively employ one’s abilities: *“A set of adaptive personal and professional capabilities that enable a veterinarian to gain and sustain employment, contribute meaningfully to the profession and develop a professional pathway that achieves satisfaction and success.”*

Employability has become a priority area for universities and employers and is a major driver in higher education (Cake *et al.* 2018). The focus on employability has created the potential to address multiple contemporary challenges for veterinary education and the profession by emphasising those capabilities most important to future career success and satisfaction. This focus has become especially relevant in light of the gap that appears to exist between employers’ expectations and the perceived capabilities of graduates (Billing 2003; Andrews and Higson 2008; Thijssen *et al.* 2008; Ashe 2012). This problem is addressed in more detail in Section 2.8.6. of this literature review. In addition, such a focus could help to balance the needs and expectations of all veterinary stakeholders, including clients, employers, industry and the graduates/employees themselves (Cake *et al.* 2018).

Concentrating on employability does run the risk, however, of positioning the discourse of veterinary professionalism into the neo-liberal framework of human capital theory. In this theory, employees are viewed as capital for the labour market; and training and skills development are seen as an investment in this capital (Becker 2009). This, and other employability frameworks, fed into the premise that graduates should be absorbed into the workplace only to produce economic benefits (Brown *et al.* 2004). This notion is increasingly rejected, particularly in the context of professional employees, and the construct of professionalism has become regarded as far more complex than merely describing a set of appropriate attitudes, behaviours and appearances to ensure employment and achieve financial success for employer and employee.

Professionalism attributes such as integrity, innovation, emotional intelligence, leadership and motivation need to be emphasised, so that the profession can better serve society as a whole (Farias 2016). It is these attributes that will be explored in the remainder of this review.

## **2.6. The changing face of veterinary professionalism**

### **2.6.1. The professional identity crisis**

It is no longer sufficient for students to acquire the knowledge, skills and behaviour necessary for practising veterinary medicine. Instead, they need to take on the identity of a true veterinary professional. The identity of the veterinary professional, however, has remained in constant flux as societal influence and expectations have influenced the role of the veterinary practitioner. This has resulted in a continuous evolution of the skills required to flourish in the profession (Armitage-Chan and Whiting 2016).

The identity of a veterinary professional has been characterised by the capability to balance the multiple responsibilities inherent in daily practice (medical knowledge, animal welfare, client and colleague communication, business finesse and statutory obligations) while working in a highly challenging environment (Armitage-Chan *et al.* 2016). The key challenge presently faced by veterinarians has been to keep current within the rapidly changing profession while satisfying the needs and expectations of clients and other stakeholders (Lewis and Klausner 2003). The ability to balance competing values now lies at the very heart of contemporary healthcare professionalism (Reis 2008).

The professionalism discourse directed towards the public has aimed to foster trust and to reassure clients that practitioners remain qualified, reliable and truthful (Shirley and Padgett 2004). Until recently, this discourse has served to promote confidence in the profession and to foster solidarity and promote common interests within members of the profession. Today, however, multiple competing discourses (e.g. consumerism, cultural diversity, feminism) have begun to threaten the dominance of the traditional veterinary professional

discourse. This discourse can no longer effectively contain all the changes occurring within society (Shirley and Padgett 2004).

Establishing an honourable professional identity, therefore, has involved a number of value orientations, including a general commitment not only to learning and practising a specific set of skills, but also to “*behaviour and practices that are authentically caring*” (Hafferty 2006 p 2152). Professionalism would be the natural result if students could be nurtured to form an identity that espouses compassion, justice and balance (Reis 2008).

MacKenzie (2007) defined the virtues that could be considered necessary to act as an honourable and sincere medical care professional. These include compassion (considering the welfare of the patient/client while adopting an empathetic position towards their suffering), discernment (acknowledging the patient’s/client’s predicament without being negatively influenced by these circumstances during decision making), and trustworthiness and honesty (establishing patient/client confidence that decisions and actions will be performed competently).

There is a risk, however, of creating the impression that veterinary professionals are infallible experts. This could result in unrealistic expectations being placed on individual veterinarians, with poor support mechanisms available when failure occurs, and they face excessively judgemental responses by colleagues and the public. Hence, Armitage-Chan *et al.* (2016) maintain that practising veterinarians should not be viewed in isolation but rather as a community of practitioners prepared to face complex professional dilemmas, and united in the presence of emotional and environmental challenges.

### **2.6.2. The influence of institutional structures**

The traditional privileges afforded by society to the medical professions have recently been challenged by the creation of conflict of interest issues arising from the powerful pharmaceutical companies and government agencies (MacKenzie 2007). Professional identity could, therefore, be “*Socially constructed and*

*sustained through institutional structures*” (Martimianakis *et al.* 2009 p 832). The implications of this are that the values and culture of institutions could become more important determinants of professional behaviour for new graduates than their veterinary educational programme. If this were the case, professionalism could be manipulated by organisations and corporations to shape curricula, and to persuade graduates to behave according to standards that such organisations deem appropriate and to agendas that serve their own interests (Slaughter 1997).

Nonetheless, it is still important to account for the changing face of the profession when teaching professionalism in veterinary schools. In New Zealand (NZ), for example, the recent shift from small (often single veterinarian) practices to larger corporate veterinary businesses, with increased specialisation and referral care (Armitage-Chan *et al.* 2016), has highlighted the necessity to focus on communication skills and interpersonal collaborative skills in veterinary education. Changes to farming practices have also altered the demands placed on large animal veterinary practitioners, as herd sizes have grown, and farms are often controlled by farming conglomerates or corporations. Veterinarians are now expected to engage in herd health programmes rather than to treat individual cows. The emphasis on production medicine demands more focus on business skills and agri-commerce in veterinary education (Mossop 2012a).

### **2.6.3. Changing gender ratios within the profession**

There has been a steady and consistent increase in the proportion of women within the NZ veterinary profession. Between 2009 and 2018, the overall proportion of female full-time equivalent personnel in the NZ workforce has risen from 42% to 56% (VCNZ 2019). In 2018, 62% (69,908/113,394) of veterinarians in the United States of America were female (AVMA 2018). In the Massey University School of Veterinary Science (SoVS) in 2019, 79% (468/590) of the enrolled veterinary students were female (SoVS 2020). This shift has influenced the veterinary profession in several ways. Phillips-Miller *et al.* (2000) reported that female veterinarians experienced significantly higher levels of domestic demands, including marital and family responsibilities, that had greater impacts on their careers, than did male veterinarians.

Research has also indicated that female veterinary students believe more strongly than their male counterparts that the bond between clients and their pet should be a concern of the veterinarian and that instruction in the importance of the human-animal bond needs to be given more priority in veterinary education (Williams *et al.* 1999). Female veterinary students also appear to show more interest in training that equips them to deal with the emotional aspects of practice effectively and are thus more likely to perceive that the present delivery of this material in veterinary education is inadequate (Butler *et al.* 2002).

Furthermore, gender may be a risk factor for the development of compassion fatigue. Hatch *et al.* (2011) found that female veterinarians were twice as likely to develop compassion fatigue and burnout than male veterinarians. In addition, women are at an increased risk for secondary traumatic stress than men (Cohen 2007). Consistent with this, female veterinarians exhibit greater levels of stress, anxiety and depression than their male counterparts (Hatch *et al.* 2011). These shifts may highlight the need to place additional emphasis on attributes such as wellbeing and resilience in the veterinary professionalism education programme.

### **2.6.4. Outdated models of professionalism**

The significant demographic changes in the veterinary profession have created a disconnection with contemporary models of professionalism. Conforming to accepted ways of thinking and behaving within the profession has traditionally been recognised as an important component of professionalism. Standardisation in medical training has been considered as the acceptable pathway to success due to the legitimacy afforded by the biomedical and scientific models (Beagan 2001). This, however, has created the risk that homogeneity and conformation to particular agendas could be forced upon students. Professionalism could, therefore, represent parts of a socialisation process that has perpetuated gender and cultural inequalities. Furthermore, the socialisation of veterinary students into the profession could be influenced by professional hierarchies which embed inequities, and which do not reflect the diversity of the current student body (Martimianakis *et al.* 2009). By conforming to traditional models of professionalism, students may be forced to suppress manifestations of their

cultural, political, economic or gender orientations especially as the veterinary profession has often represented the viewpoint of white, male and class-privileged authorities (Beagan 2001)

In light of such concerns, Shirley and Padgett (2004) strongly believed that the term professionalism has become too deeply entangled with physicians' power and privilege and is no longer useful as an organising ethical framework. They argued that professional discourse has sought to obscure this power and privilege over the interests of others by making it seem natural and appropriate. If this is so, the corollary would be that veterinary professionalism needs to develop to represent an affectively neutral class of experts dedicated to collective societal wellbeing rather than self-interest (Martimianakis *et al.* 2009). That being so, a new language would be needed to negotiate these new and challenging social practices (Shirley and Padgett 2004). As the attention given to professionalism increases in veterinary education, the challenges currently facing the profession must be accommodated to avoid the: *"...nostalgic appeals to the good old days when physicians were virtuous cowboys - riding free on the healthcare range, always available and kind to patients, and always with an invisible wife at home to keep dinner warm"* (Shirley and Padgett 2004 p 37).

### **2.7. Issues related to the teaching of veterinary professionalism**

*"Good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher"* (Palmer 1998 as cited in Hatem 2003 p 712)

#### **2.7.1. Incorporating professionalism training into the curriculum**

Clients have become more quality-service oriented, more resourceful and more culturally diverse than previously (Tinga *et al.* 2001). The success of the veterinary profession is dependent on adapting to society's changing demands, so veterinary education needs to act as a key leverage point to accommodate this change (Tinga *et al.* 2001). Thus, professionalism attributes and attitudes are essential for all veterinary students regardless of their career interests (Doucet and Vrins 2009), and so professionalism attributes should be taught with the

same rigour as other basic medical and surgical skills within the core curriculum. Veterinary education should involve a process of socialisation where students acquire the values, attitudes and beliefs essential to acting as a professional in addition to the usual knowledge and technical skills (Goldie 2008).

In exploring how to better prepare tertiary students for successful employment, Fife *et al.* (2000) attempted to define key areas of professionalism development in tertiary education. In order to produce graduates well positioned to face the challenges of the workplace, they recommended that formal training in the following attributes should be incorporated into undergraduate programmes:

- Communication (oral and written);
- Teamwork (resource management and talent development);
- Interpersonal skills (appropriate interactions and facilitating communication);
- Problem-solving (recognising problems and formulating strategies to resolve them);
- Decision-making (in conjunction with problem-solving);
- Creativity (generating novel and valuable ideas);
- Leadership (leading change);
- Project management (incorporating interpersonal skills and problem-solving);
- Continuous learning (continued enhancement of knowledge and skills);
- Practical experience (through internships and project-based learning).

Clarke *et al.* (2015) emphasised the necessity for client-centred veterinary services to give a voice to the customer and hence believed veterinary curriculum design should account for the opinion of clients in order to produce client-centred and empathetic graduates.

Professional knowledge should, moreover, never be embedded into a curriculum as an afterthought (Wear and Castellani 2000). The teaching of professionalism should not occur as an isolated module but should instead be longitudinally integrated throughout the curriculum (Mossop and Cobb 2013). The teaching of

professionalism should, therefore, be integrated into the fabric of the curriculum, covering ethical values-based approaches such as honesty, altruism, empathy, respect, accountability and confidence (Mossop and Cobb 2013). Achieving these ambitious goals is likely to require the input of bioethicists and sociologists in addition to the traditional animal scientists and veterinary clinicians (Mossop and Cobb 2013). With this in mind, Goldie (2008) proposed that comprehensive professionalism curriculum outcomes should include:

- Recognising personal and professional limitations;
- Adapting to changing circumstances throughout a veterinary career;
- Maintaining life-long learning;
- Responding constructively to appraisals and performance reviews;
- Respecting clients regardless of their culture, beliefs, race, gender, sexuality, disability, age, lifestyle, or social or economic background;
- Respecting the rights of clients to be fully involved in decision-making regarding treatments, management and care;
- Working effectively with colleagues and demonstrating effective teamwork and leadership skills;
- Communicating effectively with clients, colleagues and agencies;
- Demonstrating appropriate ethical understanding and legal responsibilities;
- Demonstrating appropriate decision-making skills and clinical reasoning and judgement;
- Engaging in personal development by demonstrating self-awareness, self-regulation, self-care and self-confidence.

Coulehan (2005) has suggested various innovative approaches to assist in the teaching of professionalism in medical schools. Self-reflection exercises through small discussion groups create an environment that is conducive for clinical staff to share their experiences with the students and reflect on their own emotional responses to clinical encounters. Critical incident narratives in a small group setting foster self-reflection and act as a powerful means of addressing learners' deeply held values and attitudes. These narratives serve to make the students aware of relationship-centered care. Such an approach to care allows the



clinicians to attend to their own needs as much as they care for their patients/clients. Coulehan (2005) also considered that this approach diminishes the archaic insistence on altruistic self-sacrifice when treating patients/clients and thus reduces the risks of emotional disengagement and burnout.

### **2.7.2. The hidden curriculum**

Three curricula can be identified in a primary veterinary qualification (Mossop 2012a). The formal curriculum includes the syllabus, the teaching and the assessing of the actual course of study. It also considers the educational settings such as lecture halls, tutorial rooms and laboratories (Larkin 2017). The informal curriculum occurs in interactions between teachers and students and is opportunistic, idiosyncratic and often unplanned. The hidden curriculum represents the subliminal and unspoken academic, social, and cultural messages of both the formal curriculum and informal curriculum that can significantly influence the culture of an institution. The hidden curriculum consists of multiple components in medical and veterinary education. These include the power hierarchy inherent in (veterinary) medicine, role models in the clinical teaching environment, the institute's rules, regulations, rituals, routines and resource allocations and the language and jargon used in the clinic wards and corridors (Hafferty 1998).

Lempp and Seale (2004) demonstrated that personal modelling upon positive role models formed an essential element of student development in medical education. The benefits of harnessing the positive effects of hierarchy in medicine, including promoting collegiality and communicating and working within teams, has also been highlighted (Karnieli-Miller *et al.* 2011). In a study conducted by Bandini *et al.* (2015), medical students recognised the importance of the hidden curriculum in modelling values such as efficiency, integrity, excellent patient care, and teamwork. The hidden curriculum can provide opportunities for students to explore their emotional experiences through self-reflection, facilitated by small group discussions and mentorship, and to think critically about the mixed messages often received between the classroom and the clinical learning environment (Chuang *et al.* 2010). Indeed, medical students have indicated that

understanding the learning that they are obtaining through the hidden curriculum is highly valuable as they transition into becoming physicians (Duhl Glicken and Merenstein 2007).

Lempp and Seale (2004) have, however, also highlighted the potentially detrimental effects of the hidden curriculum and have outlined how it could result in six negative outcomes for students:

- loss of idealism;
- adoption of a ritualised professional identity;
- emotional neutralisation;
- change of ethical integrity;
- acceptance of hierarchy;
- learning of less formal aspects of good medical practice.

The exposure of veterinary students to workplace learning and role models has made them vulnerable to the negative effects of the hidden curriculum. Humphrey *et al.* (2007) and Mossop (2012a) noted that veterinary and medical students experienced an erosion of moral reasoning and empathy across the duration of their education, especially during the clinical training years. Karnieli-Miller *et al.* (2010) analysed medical students' narratives of their experiences with clinicians in clinical settings, and discovered core themes of power, hierarchy and emotional suppression. In addition, Shea *et al.* (2000) reported that students witnessed derogatory statements made about patients, other students and other practitioners, and poor confidentiality during their workplace attachments. Howe (2002) argued that unless the clinical culture within the University teaching hospital or external practices displays and integrates similar values as those encouraged in the students, it will undermine the professional development environment and diminish the impact of the curriculum. In addition, if left unchecked, negative aspects of the hidden curriculum could force students to adapt as a survival strategy. Students could perceive that they would be rewarded for mimicking the unprofessional behaviour of their clinical instructors (O'Sullivan *et al.* 2012).

It has increasingly become expected that veterinary education should consider how the hidden curriculum affects the professionalism development of students. In fact, Mossop (2012a) and O'Sullivan *et al.* (2012) have warned that veterinary and medical schools risk becoming the “antithesis of professionalism” by encouraging hierarchy, bullying, humiliation and competitiveness. Larkin (2017) recounted the tale of a student who experienced the influence of the institution's hidden curriculum even before he had become a veterinary student. During a panel discussion on diversity during the admissions process, he had asked the admissions staff whether he should mention in his personal essay that he was a transgender man. The admissions staff advised him not to mention this, claiming that it would not be received well by faculty staff and would have a very negative impact on his chances of selection!

Mossop (2012a p 103) has emphasised, however, that the content of the hidden curriculum in each veterinary practice or teaching hospital is unique and needs to be separately assessed:

*Whether workplace learning is a good or bad thing for developing professionals may ultimately depend on the content of the hidden curriculum in each situation, underlining the importance of thought and discussion prior to placing students in a working environment.*

In order to minimise the negative influence of the hidden curriculum, attempts have been made to create a positive client/patient-centred culture and provide relationship-centred care in teaching hospitals and external practices (Brater 2007; Humphrey *et al.* 2007; Smith *et al.* 2007). Another remedy has involved highlighting and rewarding positive professional behaviour when demonstrated by students (Mossop 2012a). It has become vital that the institutional environment supports the teaching of professionalism as otherwise this hidden curriculum could undermine the entire professionalism programme (Goldie 2008).

### **2.7.3. Negative role modelling**

Traditionally, the acquisition of professional behaviours and values by medical and veterinary students has occurred mainly through an informal socialisation process (Swick *et al.* 1999). Relationships and role models have played important roles in the transmission of behaviours and values expected of professionals (Grogan 2013). Indeed, clinical instructors have been regarded as powerful role models in the socialisation of students through the demonstration of professional attitudes, behaviours and values (Clarke *et al.* 2015). This informal socialisation process is becoming inadequate, however, with the increasingly diverse social, cultural and economic backgrounds of students studying medical and veterinary sciences (Swick *et al.* 1999). Professionalism will flourish when fostered through student engagement with clinical experiences built on knowledge, methods and the development of skills outside medical science domains (Wear and Castellani 2000). This requires an intellectual widening of the veterinary curriculum that reinforces the humanistic values associated with the profession (Wear and Castellani 2000).

It is in this context that Mossop and Cobb (2013) believe that the teaching of reflective skills and the use of clinical experience are vital to teach veterinary professionalism. They maintain that it has become inadequate to expect students to rely on observation and role modelling, and that there is a need to incorporate explicit learning activities that reinforce the knowledge, attitudes, values and behaviours characterising veterinary professionalism (Swick *et al.* 1999; Mossop and Cobb 2013). Students cannot be expected to absorb elements of veterinary professionalism infused in the curriculum nor can they be expected to acquire aspects of professionalism by modelling themselves on ideal veterinarians (Wear and Castellani 2000).

Furthermore, although the importance of mentoring relationships and role models in shaping student professionalism has been highlighted, Johnston *et al.* (2011) reported that students have often had more experiences with negative role models than with positive ones. The exposure of veterinary students to negative role models could make them vulnerable to the effects of the hidden curriculum.

Samuel Shem, the author of 'The House of God' (an irreverent novel on the psychological harm and dehumanisation caused by residency training in a fictionalised hospital in the United States of America), described clinical role models antithetical to the qualities of compassion, empathy, equality and mutuality 'lurking' throughout the teaching hospital environment (Shem 2010).

Experiences with negative role models can result in the development of a tolerance or normalisation of negative behaviours and a decline in students' perceptions of professionalism (Goldie 2008). It is poor practice for clinicians to expect students to 'do as they say but not what they do' (Humphrey *et al.* 2007). Students may feel they have to tolerate negative role models, as they perceive themselves as lacking any form of power within their institutions (Bryden *et al.* 2010). In addition, students may lack confidence in their own judgements or fear repercussions should they challenge the behaviour of a role model. Furthermore, students and other faculty staff may worry about a lack of remediation once unprofessional behaviour has been identified (Bryden *et al.* 2010).

Opperman (2014) reported that displays of unprofessional behaviour by senior clinicians could be sources of stress for students, causing confusion and despair. The effect of negative role models could also impact other members of staff. More significantly, Bryden *et al.* (2010 p 1031) noted that medical faculty members claimed that their educational institutions did not value professionalism nor the teaching of it:

*We aren't evaluated as faculty and kept on as faculty because of our professionalism. I know several faculty members that come to mind who are valued for their publications and contributions who are distinctly unprofessional. And everyone recognizes it, but it's okay because they've done all these other things.*

Even so, Michalec (2012) maintained that negative role models can still have a positive impact because, as active participants in the socialisation process, students should be able to make their own choice as to what role model they wish to emulate. In addition, some authors have debated whether: "educators should

*desire a perfect learning environment, devoid of moral provocation*" (Mossop 2012a p 104). If veterinary students encounter no negative role models during their training, they may be unprepared for the realities of real life in the workplace, which may impede their future professional decision making (Mossop 2012a).

Another point to note is that while clinicians may regard themselves as positive influences, research has shown that many of them rate their own professionalism more highly than students do. Even clinical staff who appear to be effective communicators may not possess the conceptual framework to be able to explain to students what they do to be effective communicators (Tinga *et al.* 2001). Considering this, Askarian *et al.* (2015) recommended that education programmes should be conducted for clinical staff to improve their levels of professionalism and their ability to communicate it. Clinical staff and the practitioners who provide external placements would benefit from opportunities to help ensure the homogeneity and quality of teaching of communication skills (Tinga *et al.* 2001).

### **2.7.4. Assessment of professionalism**

The absence of formal assessment of professionalism attitudes and behaviours can result in learners misunderstanding their importance. Inadequate assessment leads students to assume that educators place more importance on other knowledge or skill domains that are assessed more thoroughly (Hawkins *et al.* 2009).

Various approaches to assessing veterinary professionalism have been described. Previous studies have recommended rating scales, objective structured clinical examinations, simulated client-based assessments, peer assessments, direct observations with feedback by clinical staff, critical incident reports and reflective portfolios (van Mook *et al.* 2009b; O'Sullivan *et al.* 2012). Determining the ideal method to assess professionalism remains an ongoing debate. Van Mook *et al.* (2009b p 153) described the perfect measure for professionalism as lying: "...most certainly in Utopia!".

Formative assessment has been described by O'Sullivan *et al.* (2012) as a useful method to help develop and guide students' behaviour, whereas summative assessment is seen as a means of gauging progress of students through the curriculum. Both forms of assessment, however, have traditionally focused on professional behaviour, as the attitudinal aspects of professionalism have been notoriously difficult to measure. These limitations impact the ability to measure professional attitudes that affect physician performance and the quality of patient care (Hawkins *et al.* 2009). This dilemma has been compounded by the assertion of O'Sullivan *et al.* (2012) that students' professional behaviour can be stage-managed without betraying their inner values, and that students' underlying personalities may reduce the likelihood of a positive response to a programme that aims for long-term meaningful behavioural change (O'Sullivan and McKimm 2011). It could be difficult, therefore, to provide professionalism instruction and to assess the outcome measures of professionalism in adult students who lack motivation to change or who do not possess insight into what constitutes unprofessional behaviour.

Current assessment methods for professionalism in students have, therefore, been found to be inadequate and incidents of unprofessionalism have often only been discovered through complaints (O'Sullivan *et al.* 2012). In addition, O'Sullivan *et al.* (2012) reported that professionalism is often hard to assess because of a lack of agreement amongst assessors as to what defines professionalism. Consequently, the measures of success could be difficult to determine and the difficulties with identifying and characterising unprofessional behaviour could affect the success of an appropriate remediation plan (O'Sullivan *et al.* 2012).

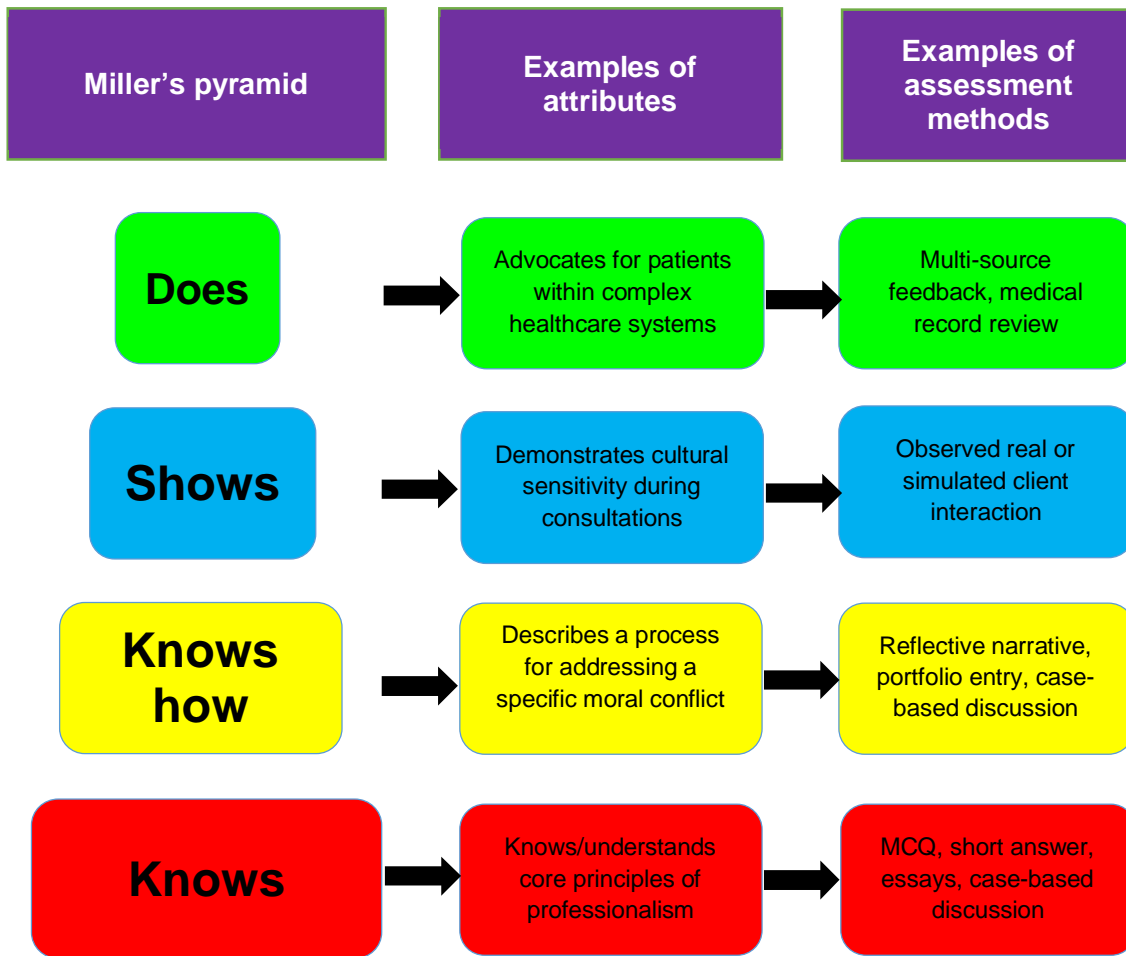
Assessment should provide feedback to learners to help them improve. Such formative assessment should, however, be focused on the provision of high-quality feedback that helps prioritise learning and is performed against clearly defined learning outcomes. A lack of meaningful feedback can undermine students' motivation to address issues identified in assessments. Summative assessment should be used to evaluate students' progress in attaining the learning outcomes (Hawkins *et al.* 2009). Conducting frequent assessments

allows remedial actions for struggling students to be undertaken in a timely way, giving learners the opportunity and the information to change.

To assist in assessment, Huddle and Heudebert (2007) and van Mook *et al.* (2009b) emphasised the importance of breaking down professionalism teaching into small discrete steps. This allows the achievement of each step to be demonstrated and assessed objectively. Govaerts (2008) felt, however, that the specification of competencies into lists of discrete tasks could cause the relationships and nuances of professionalism attributes to be lost. The inter-relationships between cognitive skills, affective attributes, interpersonal skills and psychomotor skills required to demonstrate competency risk not being captured (Norman 2016). It is vital, therefore, to identify measurable attributes or skills intrinsic to professionalism competence. Once these skills have been identified, it is important to determine whether assessment of these skills should occur within a controlled, structured environment (such as in an objective structural clinical examination) or more naturalistically within the context of clinical activities (Hawkins *et al.* 2009).

Miller's pyramid (Figure 2.B) provides a method of illustrating a developmental framework for identifying specific targets for assessment (Miller 1990). Knowledge, at the base of the pyramid, defines the foundation upon which professional competence can be built. Veterinary students need to acquire sufficient knowledge and conceptual understanding of the core elements of professionalism before being expected to express appropriate values, and exercise appropriate professionalism skills and behaviours within clinical contexts (Cruess and Cruess 2006). By defining the specific knowledge, skills and behaviours expected at each level of the pyramid, the core elements that should be measured and the assessment objectives can be determined (Hawkins *et al.* 2009).





**Figure 2.B:** The relationship between each level of competence and assessment methods (modified from Hawkins *et al.* 2009).

Rating scales to assess levels of professionalism were prescribed by van Mook *et al.* (2009b). Elements of rating scales relate to: how well the student deals with peers, teaching staff and clients; the level of student self-awareness; communication skills; and the demonstration of personal qualities such as tolerance, empathy and respect for others (van Lwijk *et al.* 2000). The dangers of the 'halo' effects and 'leniency error' inherent in rating scales have, however, been highlighted by van Mook *et al.* (2009b). The 'halo' effect occurs when the assessor allows one strong impression of the candidate to influence all consequent decisions while the 'leniency error' involves awarding generous ratings, regardless of actual performance, to appease the candidate or avoid conflict. Despite these limitations, rating scales are now used routinely in many medical (and veterinary) schools in the assessment of professionalism (van Mook *et al.* 2009b).

Norman (2016) investigated the effectiveness of in-training evaluation in capturing student performance during their final year clinical rotations. This research explored clinical supervisors' views of student performance, including performance in professionalism domains, and how that related to the constructs of veterinary competency frameworks. Various methods were described for assessing competency in veterinary education in an integrated and holistic manner (Norman 2016). One method involved the assessment of competency using Entrustable Professional Activities (EPAs). These describe units of professional activity that students can be entrusted to undertake unsupervised once they reach a prescribed level of competence (Ten Cate *et al.* 2015). Here the assessment of performance focuses on whether the student is independent enough and can be trusted to perform an activity within a particular context. The qualities that students require that enable their assessors to trust them involve aspects of conscientiousness, reliability, truthfulness, honesty, responsibility, acknowledgements of limitations and knowing when to ask for help, interpersonal communication skills, empathy and admitting and dealing with mistakes (Ten Cate *et al.* 2015). These aspects form an essential component of professional competency and demonstrate how assessing competency can be aligned with assessing trustworthiness (Norman 2016).

To expect students to effectively develop communication skills, trustworthiness, compassion and social responsibility may, however, be unfair, given the current evaluative criteria of competency and success in contemporary medical and veterinary education (Wear and Castellani 2000). Objectivity, replicability and generalisability are currently regarded as important attributes in veterinary medicine and a strong adherence to scientific knowledge and empirical methods permeates areas of medical and veterinary medicine in which understanding may be better served through alternative domains of knowledge and modes of enquiry (Wear and Castellani 2000; Armitage-Chan 2016). Philosophy, sociology and spirituality may represent domains where communication, compassion and social responsibility are better learned and practised. Factors such as gender, social class, education and cultural identity should be viewed as integral to, not separate from, establishing relevant medical knowledge (Wear and Castellani 2000).

### **2.7.5. The importance of continuous and lifelong learning**

Continuous or lifelong learning is a critical component of enhancing veterinary professionalism (Evers *et al.* 1998). Veterinary employees are only valuable to their employers if their skills continue to be maintained and developed long after their formal education has ended, and veterinarians have to make continual efforts to keep up with rapidly changing workplace requirements. Farias (2016 p 33) stated that: “*Graduates must not only acquire the foundational knowledge and skills to succeed within the workforce but must also be able to undergo a process of continuous learning in order to adapt and remain viable within the employment market.*”

Evers *et al.* (1998) considered that knowledge has, at best, a half-life of four to five years. This means that learning should be regarded as a dynamic process that does not end at graduation. If this is indeed the case, tertiary education has a responsibility to assist students to become lifelong learners who constantly pursue new knowledge (Bok 1986). The corollary of this is that during their tertiary education students must be encouraged to become self-motivated to continue learning after graduation.

Developing veterinary professionalism remains an active process requiring the use of key competencies such as self-assessment and self-discovery, whilst employing other skills such as risk-taking, communication and even conflict management (Bigelow 1996). The veterinary curriculum must continuously refine its mission to include appropriate veterinary professionalism development as well as opportunities to encourage continuous learning.

### **2.7.6. Employers’ expectations of professionalism attributes**

The issue of equipping graduates with the motivation to become lifelong learners raises the issue of the disconnection between the expectations of employers and tertiary institutions. Farias (2016) emphasised the importance of tertiary institutions creating and maintaining partnerships with the employers hiring their graduates. This author considered that the need for collaboration is vitally

important to assist learners who are seeking an edge in a competitive job market. Rather than just concentrating on the delivery of specialised knowledge in core disciplines, tertiary education should consider delivering general knowledge that is transferable across all disciplines as this, in essence, is the underlying theme of professionalism and employability (Farias 2016).

Candy and Crebert (1991) identified two features of tertiary education that hindered the adequate preparation of students for their prospective roles in the workplace. Firstly, the focus in universities was often on individual competition as opposed to the collaborative teamwork that is favoured in the workplace. Secondly, tertiary education promoted the acquisition of academic knowledge, unlike the workforce that focused on task-specific projects (Candy and Crebert 1991). Similarly, Shivpuri and Kim (2004) highlighted the divide between what universities deem important for students to learn and what employers value in a new graduate. In their study, employers rated interpersonal skills as the most important attribute for graduates, while academics rated knowledge to be most important. Both parties agreed only on the importance of ethics and integrity (Shivpuri and Kim 2004). Further studies have also revealed that employers often rank new graduates' personal attributes and interpersonal skills higher in importance than veterinary-specific knowledge and skills (Heath and Mills 2000). Schull *et al.* (2020) interviewed 18 veterinary employers to determine their requirements for veterinary graduates. They found four selection factors demanded by employers:

- Personal attributes - the personality and character of the candidate, as appraised by the employer;
- Interpersonal skills - factors associated with the way candidates present themselves and interact with others;
- Veterinary capabilities - specific knowledge and technical skills;
- Job match - the interaction between the candidate's personal attributes, interpersonal skills, veterinary capabilities and the specific job (Schull *et al.* 2020).

These studies, therefore, illustrated the lack of consensus between the expectations of academia and the requirements of the workplace, and highlighted the need for both parties to collaborate more with regards to the employability skills that are required by graduates (Shivpuri and Kim 2004).

The urgency needed to address this issue was highlighted by the 'VetFutures' survey conducted by the British Veterinary Association (BVA) in conjunction with the Royal College of Veterinary Surgeons in the United Kingdom in 2015, which found that only 17% of veterinary graduates (five years or more after graduating) felt their degree prepared them 'very well' for their career (BVA 2015).

This has raised the possibility of employer input into curriculum design. Little research on the effects of employer and higher education institution collaboration has been conducted in veterinary education. Mason *et al.* (2009) reported positive outcomes from this collaboration in designing effective courses across multiple disciplines for the preparation of new graduates entering the work force. These authors also found that structured work experience led to increased success of graduates finding employment (Mason *et al.* 2009). Pavlin (2014) described key steps to help foster interaction with employers and tertiary institutions and thus drive graduate success. These included: increased employer cooperation for internships and job training, improved tertiary institution provision of lifelong learning activities and continued research into best practice for tertiary institution-employer collaboration.

All employers emphasised that finding the right match was a critical consideration when recruiting new graduates. Furthermore, each graduate has a different personality, discrete needs and a distinct skill set, and this may not always suit the needs of a workplace at a particular time (Schull *et al.* 2020). This highlights the necessity for veterinary schools to equip students with an awareness of their own attributes and capabilities and how to assess and communicate their fit with the requirements of prospective employers.

Evers *et al.* (1998) provided reassurance that the move towards more skills-based education was not a paradigm shift away from the core values of higher

education, but a compromise with employers to increase the success rate of graduates finding employment. Veterinary schools should consider engaging in constant dialogue with all stakeholders over the topic of professionalism to meet the needs of both employers and graduates.

Ultimately, however, the responsibility for professionalism attributes resides with each veterinary student. While the veterinary undergraduate degree remains obliged to provide engaging instruction on professionalism, along with opportunities to gain experience with key professionalism attributes, the veterinary student must be receptive and have a desire to learn (Schull *et al.* 2020).

### **2.8. Summary**

Recent years have seen a significant change in the teaching of professionalism in primary veterinary qualifications. In the previous model, senior students were only exposed to veterinary professionalism through role modelling by clinical teaching staff during clinical rotations and during external placements with private practitioners. Such an informal socialisation process has become inadequate, and it is now evident that veterinary schools are assuming a greater level of responsibility for providing a programme to develop the attributes of veterinary professionalism associated with veterinary career success (Lewis and Klausner 2003).

Taxonomies of veterinary professionalism attributes have been devised by multiple authors and include the domains of interpersonal and communication skills, interprofessional collaboration and personal and professional development (Cake *et al.* 2016). It is essential in veterinary education, however, to ensure that professionalism is not reduced to lists of attributes (Anijar 2004) as this could prove insufficient in equipping new veterinary graduates with the necessary skills required for career success (Nielson 2001).

Professionalism attributes and attitudes are essential and should be taught with the same rigour as other medical and surgical skills within the core curriculum. Professionalism instruction should also be integrated throughout the curriculum, covering ethical, values-based approaches such as honesty, altruism, empathy, respect, accountability and confidence (Mossop and Cobb 2013).

The concept of employability has become a major driver in higher education (Cake *et al.* 2018). Veterinary education must focus on those capabilities important to future career success and satisfaction. A gap appears to exist between employers' expectations and the perceived capabilities of graduates, and so increased employer cooperation in regards to tertiary education, lifelong learning activities and research into best practice for tertiary institution-employer collaboration needs to be developed (Billing 2003; Andrews and Higson 2008; Thijssen *et al.* 2008; Ashe 2012; Pavlin 2014).

Veterinary education programmes must consider the effects of the hidden curriculum on professionalism development. The exposure of veterinary students to workplace learning and clinical role models has made them vulnerable to the effects of the hidden curriculum, so it is essential that veterinary schools create a culture of positive client-veterinarian relationships and care in teaching hospitals and external practices (Brater 2007; Humphrey *et al.* 2007; Smith *et al.* 2007). It is vital that the institutional environment supports the teaching of professionalism, as otherwise the hidden curriculum can undermine the entire professionalism programme (Goldie 2008).

Tertiary education also has a responsibility to assist students in becoming lifelong learners constantly pursuing new knowledge (Bok 1986). Tertiary education should, therefore, encourage veterinary students to become self-motivated to continue learning after graduation.

A professionalism education programme within a veterinary curriculum has now been identified as a priority. This makes it imperative that the professionalism attributes identified by veterinary stakeholders are included in future professionalism education in veterinary curricula at Massey University. Such programmes in veterinary professionalism will hopefully contribute to veterinary graduates enjoying career success and will ultimately reduce work-related stress and the risk of complaints being laid by clients against veterinarians.





## 3. Methodology

### 3.1. Overview

This chapter provides an overview of the mixed methods approach taken to the research in this thesis. The use of a mixed methods approach is described and justified in the context of these studies. The theoretical perspectives underpinning this research are discussed and their inherent assumptions addressed. Issues of validity and ethical approval are also discussed. The methodology used in each study will be discussed in more depth in the Methods section of each relevant chapter.

### 3.2. Quantitative versus qualitative research

*“Not everything that counts can be counted and not everything that can be counted counts”* (attributed to Albert Einstein).

Research methods generally fall into two broad categories, quantitative and qualitative. These two categories of research methodology are not necessarily exclusive and the use of a combination of both quantitative and qualitative types of research enquiry has now been widely advocated (Punch and Oancea 2014). The purpose of the study should drive the research method selected. Quantitative research is for larger samples and is used to make generalisations about the sample to a larger population (Redmann *et al.* 2000). Generalisability refers to the degree that research findings and conclusions from a study conducted on a sample could be extended to the population from which the sample was drawn (Redmann *et al.* 2000). In contrast, qualitative research is primarily effective at exploring in-depth understandings about a phenomenon by a group of individuals, with certain limitations on how the findings can be generalised (Punch and Oancea 2014). The emphasis of qualitative methods has centred around saturation. With saturation, a comprehensive understanding is attained through continuous sampling until no new substantive information is acquired (Miles and Huberman 1994).

Quantitative research is underpinned by a positivist philosophy that prescribes the collection of numerical data for statistical analysis to generate theories or hypotheses that can then be scrutinised using empirical tests (Borg and Gall 1989; Gummery 2019). In quantitative approaches, sampling strategies and experimental designs must be carefully selected with the aim of producing generalisable results. Extraneous influences on the groups studied must be avoided to help strengthen the reliability, validity and predictive capacity of the phenomena being studied (Glesne 2016). In contrast, qualitative research is rooted in post-positivism philosophy and evolved from the social sciences (Redmann *et al.* 2000). Qualitative enquiry draws on narrative description and is used to obtain a rich and detailed account of the human experience and an in-depth understanding about a phenomenon within a study group (Ary *et al.* 2018).

With qualitative enquiry, counts and statistical analysis are regarded as less important and instead investigators analyse the social environment and base their results and conclusions around theoretical frameworks (Mossop 2012a). This approach is more inductive, allowing ideas and concepts to emerge from the research participants. Qualitative research represents “*a shift from measurement to understanding; from causation to meaning; from statistical analysis to interpretation*” (Joffe 2011 p 219). Denzin and Lincoln (2005) described qualitative research as a means of studying phenomena within their natural settings while interpreting these phenomena in terms of the meanings people bring to them. Potentially, this approach can run the risk of placing excess focus upon participants’ meanings and experiences without accounting for how culture or context may influence the outcomes (Shidur Rahman 2017), but, on the other hand, may merely require that the researcher is aware of such a potential.

A deductive inferential method is employed in the quantitative research method that involves the testing of preconceived hypotheses (Borg and Gall 1989). In qualitative research, however, the hypotheses and themes often emerge inductively as the study develops (Ary *et al.* 2018).

Each methodology, in turn, has different expectations and standards for determining the number of participants required to achieve its aims. Quantitative

research generally demands random sampling for participant selection while qualitative research prefers purposive sampling. In addition, quantitative research employs strategies to minimise interactions between the researcher and the participants, whereas qualitative research acknowledges the interconnectedness between the researcher and the participants and the influence they have upon each other (Borg and Gall 1989).

In the current positivist environment enveloping veterinary research, policy makers may give low credibility to results from a qualitative approach (Shidur Rahman 2017). However, provided that qualitative research is approached with the same rigour employed in a positivist, quantitative approach, there is no evidence that such criticisms are justified. Rather, quantitative and qualitative methods each provide different perspectives towards the description of reality: recognising, of course, that there is no single version of reality (Mossop 2012a).

In qualitative research, data interpretation and analysis can be complex and time consuming (Shidur Rahman 2017). Berg and Lune (2012 p 4) noted that: *“Qualitative research is a long hard road, with elusive data on one side and stringent requirements for analysis on the other”*. To ensure quality in qualitative research, Creswell and Poth (2017) described different validation strategies, which included the triangulation of different evidence sources to check for convergence and corroboration of results, peer review, the acknowledgement of researcher bias and prior assumptions, and external auditing using independent reviews.

### **3.3. Mixed methods design**

A mixed methods design has been adopted in this thesis, employing both qualitative and quantitative approaches. Mixed methods research represents a synthesis of the intellectual and practical components of quantitative and qualitative research to allow a better understanding of research problems (Gummery 2019). The imperative to use mixed methods designs was precipitated by a growing awareness that the challenges of implementing evidence-based interventions and programmes were too complex to support a single

methodological approach (Palinkas *et al.* 2016). In mixed methods designs, qualitative methods can be used to explore and obtain a depth of understanding of the issues under study, while quantitative methods can help to test and confirm hypotheses based on an existing conceptual model (Tashakkori and Teddlie 2010).

There is a growing appetite to abandon the quantitative-qualitative dichotomy and instead use both methods to complement each other (Pope and Mays 2009). The use of both qualitative data and quantitative data within a single study provides a more complete picture through the analysis of numerical data while gaining an in-depth insight into the participants' perspectives (Gummery 2019). With a mixed methods design, one research approach can inform the other and the interpretation of results can benefit from this wider scope of data obtained (Mossop 2012a).

Since the aim of the present research was to establish the opinions of veterinary stakeholders on important veterinary professionalism attributes for career success, merely counting the different opinions offered would have been insufficient. Instead, an understanding of the attitudes and behaviours of all of the veterinary stakeholders was required (Mossop 2012a). This contextual exploration was undertaken with the understanding that veterinary stakeholders' opinions on veterinary professionalism represents a complex construct to analyse. This constructivist approach challenges the concept of absolute truth and holds that research should consider capturing the research subjects' meaning, understanding and perspectives rather than just considering numerical measurements (Myers 2000).

The main data collection methods in quantitative research include surveys/questionnaires, observations and tests; while qualitative research involves participant observation, in-depth interviewing and open-ended surveys/questionnaires (Redmann *et al.* 2000). In this thesis, quantitative data collection methods were used in Chapters 4, 5 and 7. In Chapter 4, a card-sort analysis was implemented to solicit the opinions of first year veterinary students at Massey University on important veterinary professionalism attributes for future

career success. In Chapter 5, a survey instrument was used to determine the opinions of final year veterinary students presented with the same enquiry. In Chapter 7, descriptive statistics were used to describe all notifications and complaints lodged by clients and veterinary staff against veterinarians over a 25-year period. Qualitative data collection methods were employed in Chapter 5 using final year veterinary student focus groups, in Chapter 6 using the critical incident narratives of veterinary clinical practitioners, and in Chapter 7 using complaints data lodged by clients against veterinarians. Table 3.A provides an overview of the qualitative and quantitative components of the studies within this thesis.

#### **3.4. Theoretical research perspectives used in this thesis**

The three fundamental elements of research are ontology, epistemology and philosophical perspectives (Howes 2015). Ontology is what exists in the human world that researchers can acquire knowledge about, epistemology is how knowledge is created, and philosophical perspective is the philosophical orientation of the researcher that guides their actions (Moon and Blackman 2014). When conducting research, it is important to acknowledge how:

*the ontological position of the researcher can influence the nature of the research; how the epistemological position can be used to support the legitimacy of different types of knowledge; and how philosophical perspective can shape the researcher's choice of methods and affect interpretation, communication, and application of results (Moon and Blackman 2014 p 1167).*

**Table 3.A:** An overview of the qualitative and quantitative components used within the mixed methods approach to research.

Chapters	Research questions	Quantitative study components	Qualitative study components	Rationale/comments
4	1. What are the perceptions of first year veterinary science students on the professionalism attributes important to veterinary career success in future clinical practice?	Descriptive statistics and inferential statistical analysis of categorical data from the card-sort analysis with first year veterinary students		A quantitative study using a card-sort analysis that allowed students to rank the importance of veterinary professionalism attributes for future career success. Responses were also stratified based on the demographic make-up of the respondents
5	What are the perceptions of final year veterinary science students on: 2. the professionalism attributes important to career success in veterinary clinical practice? 3. the suitability of the current veterinary professionalism educational programme in the primary veterinary curriculum?	Descriptive statistics and inferential statistical analysis of categorical data from the survey of final year veterinary students	Thematic analysis of transcripts of final year veterinary student focus groups	A concurrent study where the online survey was first used to rank the importance of veterinary professionalism attributes and provide opinions on the effectiveness of the veterinary professionalism undergraduate training programme. The focus groups were then used to generate in depth discussion on important veterinary professionalism attributes and on the effectiveness of the veterinary professionalism educational programme
6	4. What are the perspectives of practising clinical veterinarians, using the critical incident technique (CIT), regarding veterinary professionalism attributes important for continuing career success as clinical practitioners?		Thematic analysis of transcripts of positive and negative critical incident interviews conducted with clinical veterinary practitioners	A qualitative study using the CIT to determine important veterinary professionalism attributes for career success
7	5. What are client perceptions, based on the nature of veterinary complaints lodged by clients with the Veterinary Council of New Zealand (VCNZ) against veterinarians, on important veterinary professionalism attributes for veterinary clinical practitioners?	Descriptive statistics describing all notifications and complaints, lodged by clients and veterinary staff against veterinarians from 1992-2016	Thematic analysis of client complaints lodged with the VCNZ and the veterinarians' responses to these complaints	A concurrent study beginning with descriptive statistics describing all notifications and complaints lodged by clients and veterinary staff against veterinarians over a 25-year period followed by a qualitative study using client complaints over a three-year period to ascertain clients' perceptions on important veterinary professionalism attributes for practising veterinarians

### **3.4.1. The ontological position adopted**

For this research, the ontological position adopted was a mixture of realism and relativism. Following the realist ontological position, a belief in the existence of one single reality that can be studied, understood, and experienced as a real world independent of human experience is assumed (Moses and Knutsen 2012; Howes 2015). In contrast, the relativist ontological stance would have one believe that reality is constructed within the human mind, such that no one true reality exists. From a relativist's perspective, therefore, reality is relative according to each individual who experiences it (Moon and Blackman 2014).

This research has, therefore, followed the ontological perspective of critical realism as described by Moon and Blackman (2014) and Tashakkori and Teddlie (2010). The critical realist sits in the middle of the realism/relativism spectrum and assumes that the nature of reality is not static and can change as the participant's capacity to understand it or describe it changes. Considering this, the critical realist researcher demands that claims about reality must be subject to broad critical scrutiny (Moon and Blackman 2014).

This focus on the demand for a broad examination of participants' version of reality positions critical realism as the most appropriate ontological tool to explore the research questions in this thesis. Adopting a critical realist position requires the observations, experiences and perspectives of the research subjects in this thesis to be thoroughly scrutinised in order to derive meaning from the data.



#### 3.4.2. The epistemological stance adopted

Epistemology is concerned with the methods of how knowledge can be produced or acquired (Howes 2015). It is an important concept to consider as the epistemological position has an influence on how the attempt to discover knowledge will be framed throughout the research.

Objectivist researchers would assume that there is an objective reality that exists independently of the research participants. In the objectivist mindset, knowledge should be verifiable and generalisable and independent of individual thought (Bauman *et al.* 2002). In contrast, a subjectivist researcher would assume that individuals impose their own meaning on reality and knowledge. What constitutes knowledge or truth, therefore, would be dependent on how these individuals perceive and understand reality. In subjectivism, research participants impose meaning and values on to their worlds and interpret this reality in a way that makes sense to them (Moon and Blackman 2014). Inspired by Pratt (1998), Moon and Blackman (2014 p 1172) stated: "*Whereas the motto of objectivism might be seeing is believing, the motto of subjectivism might be believing determines what is seen*".

For this research, the epistemological position of constructionism has been adopted. This position occupies the middle ground of the epistemology spectrum. A constructionist would assume that the research participants construct knowledge and meaning as they engage with and interpret the world. By assuming a constructionist position, it would be essential to recognise that individual participants would construct meaning of the same phenomenon in different ways based on their different cultural, historical and social perspectives (Moon and Blackman 2014; Howes 2015).

#### **3.4.3. The philosophical perspective adopted**

The philosophical perspective is concerned with the philosophical orientation of researchers that forms their beliefs and the assumptions that guide their approach to research (Howes 2015; Moon and Blackman 2014). Qualitative research can only be meaningfully and appropriately interpreted when the researcher has sufficient understanding of the philosophical perspectives and assumptions inherent within their disciplinary base (Heberlein 1988; Mascia *et al.* 2003; Newing 2010). Traditionally veterinary research has been dominated by natural scientists oriented towards positivism (Evely *et al.* 2008). Positivists believe that knowledge can only be generated from objective empirical observations (Crotty 1998). Positivism cannot, therefore, properly account for the subjective nature of human reasoning and thought (Evely *et al.* 2008). Considering this, the philosophical perspectives adopted for this study have embraced both social constructivism and interpretivism.

The social constructivist standpoint assumes that the research participants make meaning of reality in their own way. From a social constructivist viewpoint, making meaning of reality remains an activity of the individual mind. Individual participants, therefore, define and frame their problems in their own unique manner. In this research it was, therefore, essential that the differences between individuals were understood and accounted for when evaluating the experiences of the research participants (Moon and Blackman 2014).

The interpretivist research standpoint assumes that interpretations of reality are contextually dependent on the culture and history of each individual. Interpretivist research does not place emphasis on seeking to identify parameters or establish rules that could explain human behaviour. Instead it attempts to understand this behaviour by looking at individual cases and tracing the development of phenomena (Crotty 1998). In this thesis, all the participants' different interpretations were regarded as contextually dependent on the culture and history that influenced how each individual made meaning of their world (Moon and Blackman 2014). Through this interpretivist approach, the biases and

perspectives of the researcher, that influenced data collection and analysis, were also made explicit (Patton 2014).

Both the social constructivist and interpretivist philosophical perspectives adopted in this research were underpinned by a healthy dose of pragmatism. Pragmatism represents a compromise between empiricism, where knowledge is derived from sensory experience, and rationalism, where knowledge is derived from deductive and logical reason (Moon and Blackman 2014). As a research technique, pragmatism is not committed to any one philosophical position and instead uses a diversity of methods to understand a given problem (Creswell and Poth 2017). In pragmatism, the underlying philosophy is less important than the consequences and practical importance of the research (Cherryholmes 1992). A pragmatic perspective was consistent with the critical realist position adopted in this thesis as it assumed that there were different perspectives of reality and different accounts of phenomena that were equally valid (Johnson and Onwuegbuzie 2004).

It is important to realise that all ontologies, epistemologies and philosophical perspectives are characterised by a degree of pluralism. Researchers often adopt more than one philosophical approach and change their ontological and epistemological perspectives towards their research over time (Moses and Knutsen 2012). Researchers need not commit to only one philosophical perspective and all associated ontological and epistemological positions. Nonetheless, the assumptions inherent in the critical realist ontology, the constructionist epistemology and the philosophical perspectives (incorporating social constructivism, interpretivism and pragmatism) assumed for this research project were compatible with the mixed methods research design adopted.

#### **3.4.4. Phenomenology**

Phenomenology falls within the interpretivist philosophical perspective and holds that the research subject's experience of a phenomenon can only be understood when the researcher suspends his or her own meanings of reality. Interpreting an

individual's personal experience of a phenomenon in this way can give rise to a richer meaning of the phenomenon (Moon and Blackman 2014).

Edmund Husserl developed the phenomenological research method in 1931 (Moustakas 1994). Phenomenology involves undertaking a prolonged period of study of a particular phenomenon so that the phenomenon can be understood and interpreted (Reyes 2018). In this research method, the researcher must engage in the process of 'epoch reduction' or 'bracketing' in which the researcher must avoid passing judgement about participants' individual opinions, beliefs and actions and instead focus entirely on the analysis of participants' experiences. Phenomenology researchers must suspend their prejudgements and preconceptions regarding specific phenomena to be able to gain an unbiased understanding of the research subject's description of lived experiences (Moustakas 1994).

When analysing phenomenological data, the researcher must describe their own experiences with the phenomenon while coding significant statements made by the research subjects and collating these codes into subthemes, major themes and minor themes (Dowling 2007). This process must of course be preceded by the process of epoch reduction or bracketing so that the researcher remains free of biases and focuses only on the participant's views. To achieve epoch reduction, it is important that the researcher acknowledges the circumstances and conditions in which the research has occurred (Moustakas 1994). Furthermore, the researcher must admit their personal views and previous experiences with the phenomenon under study and remain honest and transparent while gathering and analysing the data (Reyes 2018).

Mossop (2012a) has warned, however, that the topic of veterinary professionalism may be too broad to be labelled as a phenomenon. Phenomenological studies tend to focus on single questions or experiences, and this focus may fail to elicit the essence of this study's research questions. The aim of this study was, however, to gain an understanding of veterinary students' and veterinary practitioners' insights and lived experiences of veterinary professionalism and the phenomenological approach could bring to the surface

the tacit knowledge and attitudes that underlie these. The phenomenological approach was, therefore, perfectly suited to apply to this study as the lived experiences of fifth-year veterinary students engaged in focus groups (Chapter 5) and veterinarians narrating positive and negative critical incidents (Chapter 6) were gathered and analysed.

#### **3.4.5. Grounded theory**

Mention must be made of grounded theory (GT) as a qualitative strategy of enquiry. Grounded theory was first described by Glaser and Strauss (1967) and has been used in this thesis, in Chapters 5, 6 and 7, as a strategy of enquiry rather than as a methodology or as a philosophical perspective. The premise of GT is that theory is developed from the ground up with no preconceptions or hypotheses to prove or disprove (Mossop 2012a). The theory should arise from the data in an inductive process. In the analysis of the data from a GT approach, the data should be allowed 'to speak' for themselves (Strauss 1987).

Kennedy and Lingard (2006) described the following components of GT research:

- Theoretical sampling to saturation;
- Iterative collection and analysis cycles to shape data collection to pursue emerging themes;
- Constant comparative analysis with open and axial coding and memo-writing for generation of interpretive theories.

The GT researcher starts with an area of interest to explore and theorise about and then develops this theory in parallel with the data collected. A continuous comparison of the data is necessary to inform the sampling process and determine the nature of the data to be collected. This is an iterative process in which the data collected reshapes the theory and informs the next stage of the research. A theoretical framework can then be developed by analysing the data and coding the collected data until themes begin to emerge. Data collection can only cease when saturation has occurred, and no new themes have developed (Mossop 2012a).

Grounded theory is itself a research methodology designed to develop, through the collection and analysis of qualitative data, a set of concepts that provide a theoretical explanation of a social phenomenon (Kennedy and Lingard 2006). A grounded theory approach was appropriate for this thesis as the research question involved the opinions, perceptions and experiences of veterinary stakeholders on veterinary professionalism attributes important for career success. Furthermore, the research aim was to develop a theoretical framework on veterinary professionalism rather than testing an existing theory. This grounded research approach, therefore, attempted to develop a framework from the ground up with no preconceptions or hypotheses to prove or disprove (Mossop 2012a). Instead, the theoretical framework was grounded in, or developed from the data, as they were collected and analysed (Kennedy and Lingard 2006).

Kennedy and Lingard (2006) emphasised the importance of avoiding conducting a GT analysis without undertaking GT research. Often researchers only engage in the analytic process of GT research. This, however, represents only one component of the GT approach and the iterative data collection and the theoretical sampling to saturation components are overlooked. In the present study, some of the critical incident interviews were collected as a batch and analysed subsequently using open and axial coding. This meant that, while a GT approach for the data analysis was always undertaken, it was not always applied to the data collection. In a true GT approach to data collection, the interviews and analysis should occur simultaneously for the sampling to evolve in response to the emergent themes (Kennedy and Lingard 2006). Grounded theory does not, however, have to be all or nothing, but it is important to specify, with reasons, which aspects of GT were incorporated into the study and which aspects were excluded.

Furthermore, Kennedy and Lingard (2006) warn about a danger inherent in GT research of only describing the themes and not developing the theory. They describe this as 'analysis interruptus'! The art of GT is, however, building the framework or theory. This requires the crafting of a story that explains why the themes matter in the bigger picture. It is insufficient to provide detailed descriptions of thematic categories, accompanied by illustrative excerpts, without

theory. Grounded theory research involves a process of inductive analysis leading towards increased articulation of the relationships between themes. This high-level interpretive process should draw on other research findings and theoretical constructs towards developing an explanatory theory or framework (Kennedy and Lingard 2006).

#### **3.4.5.1. Constructivist grounded theory**

Since a GT approach allows a systematic and rigorous approach, generating theories which are both reliable and valid, this methodology suits the positivistic inclination of veterinary education research. Grounded theory has been used in previous veterinary and medical educational studies to inform curriculum design (Tavakol *et al.* 2006; Mossop 2012a). Mossop (2012a) used a GT approach to establish a definition of veterinary professionalism and to design a veterinary professionalism curriculum.

Mossop (2012a) has expressed some concern with GT methodology, however, because of the degree of prior knowledge of the researcher in clinical education. In GT research, there is a tension between the need to balance the search for emergent themes with the application of existing theoretical knowledge. Constructivist GT, as developed by Charmaz (2014), has moved beyond the positivist mindset of approaching data with a clear mind and no preconceptions. The constructivist approach accounts for prior researcher knowledge by accounting for the fact that both the researcher's experiences and own ideas will influence the findings. The constructivist GT approach assumes that the researcher can never separate themselves from the process under study. The very nature of constructivist GT supposes that data cannot be interpreted without the researcher's pre-existing ideas and beliefs being imposed on the theoretical framework being created (Kennedy and Lingard 2006). The influence of the researcher's subjective views can, however, be mitigated by ensuring that all interpretations of the research findings are based on credible, accurate and thorough observations (Norman 2016). Furthermore, the use of a mixed methods approach allows multiple sources of evidence (numeric survey data in Chapters 4 and 5; responses to open survey questions and focus group transcripts in

Chapter 5; transcripts of critical incident interviews in Chapter 6; records of client complaints and notifications in Chapter 7) to triangulate the data and identify any uncertainties, inconsistencies and potential researcher biases.

For the focus group study (Chapter 5), the critical incident study (Chapter 6) and the client complaints study (Chapter 7), a dual analytical process of constructive GT, as described by Kennedy and Lingard (2006), was applied. This involved the application of preselected themes that had emerged in earlier chapters and prior literature reviews with attention to emergent themes that had not been accounted for in earlier studies. This dual process allowed maintenance of the exploration of emergent issues while developing a theoretical explanation of the phenomenon that accounted for prior researcher knowledge (Kennedy and Lingard 2006).

The comparison between phenomenology and GT as qualitative analysis approaches is shown in Table 3.B.

**Table 3.B:** A comparison of qualitative analysis approaches (modified from Thomas 2006 p 241).

Research steps	Qualitative analysis approaches	
	Phenomenology	Grounded Theory
Analytic strategies and questions	Seeks to uncover the meaning that lives within experience and to convey felt understanding in words	To generate or discover theory using open and axial coding and theoretical sampling
Outcome of analysis	A description of lived experiences	A theory or framework that includes themes or categories
Presentation of findings	A coherent story or narrative about the experience	A description of the theory/framework that includes core themes

### 3.5. Methods of data collection and analysis

#### 3.5.1. Sampling methods

Sampling strategies for quantitative methods used in mixed methods designs are generally well established and based on probability theory. Sampling involves the random selection of large numbers of participants that seeks to represent the



wider population. Hess-Holden (2017) determined that a total sample of 300 participants should be considered in quantitative research to provide power in excess of 0.90 for all statistical analyses. A minimum of 230 participants was, however, determined to be a fail-safe sample size that would provide power of at least 0.80 for all statistical analyses (Rosenthal 1979). In qualitative research, however, non-probability sampling is commonly used, which does not attempt to replicate the wider population, just the sample in question (Palinkas *et al.* 2016).

#### **3.5.1.1. Purposive sampling**

The selection of research subjects in the final year veterinary students' focus group study in Chapter 5, and the veterinary practitioners' critical incidents study in Chapter 6 used purposive sampling (i.e. the deliberate choice of participants due to the qualities those participants possessed). Once the key research questions had been determined, participants were selected for each study on the basis of their knowledge and experience. This method of sampling is typically used in qualitative research to identify and select information-rich cases to maximise the utilisation of available resources (Etikan *et al.* 2016; Palinkas *et al.* 2016). Allen (2014 p 72) believed that purposive sampling allowed the selection of participants able to generate data with a high: "*potential for discovery, deeper understanding, contradictions and implications for practice*". Grounded theory data analysis relies on purposive sampling, as it demands that participants have experience of the phenomenon (Creswell and Poth 2017).

Grounded theory analysis is enhanced by purposive sampling as it allows researchers the opportunity to develop concepts and identify relationships between concepts up to a point where no new discoveries are being made, or saturation has been achieved (Corbin *et al.* 2014). Since purposive sampling involves deliberately choosing participants who are proficient in and well informed about the phenomenon of interest, it represents a non-random technique that does not require underlying theories or a set number of participants (Etikan *et al.* 2016; Palinkas *et al.* 2016).

The limitations of purposive sampling relate to the subjective nature of choosing the sample inasmuch as the sample may not be representative of the population. These sampling techniques are, however, useful when randomisation is impossible (e.g. with a very large population) or when the researcher has limited resources or time (Etikan *et al.* 2016).

#### **3.5.1.2. Convenience sampling**

The veterinary students selected for the focus groups in Chapter 5 and the veterinarians selected for the critical incident interviews in Chapter 6 were also selected using a convenience sampling technique. This is a type of non-random sampling where members of the target population that meet certain practical criteria are included for the purpose of the study (Etikan *et al.* 2016). Veterinary students were selected for the focus groups based on their willingness to participate. Veterinary practitioners were selected for the critical incident interviews based on their geographical proximity, availability and willingness to participate.

Convenience sampling is very vulnerable to researcher bias, so it is essential for the researcher to describe those subjects who might be excluded during the selection process and those subjects who might be overrepresented in the sample. A key assumption associated with convenience sampling is that the members of the target population are homogeneous, meaning that there would be no difference in the research results obtained from a sample gathered from some other part of the population (Etikan *et al.* 2016).

#### **3.5.2. Card-sort analysis**

In Chapter 4, a closed, structured card-sort game was played with the Massey University first year Bachelor of Veterinary Science class intakes of 2014, 2015 and 2016. This game was undertaken to gain insight into those students' opinions on important veterinary professionalism attributes for future career success. The intention of this exercise was to gain an understanding of the perspectives of first year veterinary students, who were largely unfamiliar with the veterinary

profession and had yet to receive any formal instruction in veterinary professionalism.

Although less direct than interviews or focus groups, the structured card-sort was selected as an appropriate methodology to uncover student opinion. This method has been used in prior educational research. Card-based educational exercises have been found to be efficient and worthwhile educational aids for soliciting participants' understanding and learning (Luniewski *et al.* 1999; Quintiliani *et al.* 2008; Righi *et al.* 2013; Mammen *et al.* 2016). Participants in a study conducted by Mammen *et al.* (2016) were able to develop their own contextually grounded narratives about their perceptions of complex behavioral processes associated with asthma using card-sort techniques. Luniewski *et al.* (1999) used card-sorts to determine the learning needs of patients with heart failure to help reduce hospital readmissions.

Card-sort analysis could be used for both quantitative and qualitative research (Mammen *et al.* 2016). There are many approaches to card-sorting, including novel techniques developed for very specific studies (Neufeld *et al.* 2004; Quintiliani *et al.* 2008; Righi *et al.* 2013; Mammen *et al.* 2016). Hierarchical and sequential card-sorts require participants to rearrange their sorted piles into a ranked order based on specified criteria. These may prompt a participant to alter the rationale behind their sorts as they begin to sort their piles again (Neufeld *et al.* 2004).

In this study, a form of hierarchical card sorting was adopted, following methods described by Neufeld *et al.* (2004). First year veterinary students were asked to review a series of veterinary professionalism attributes, each displayed on a separate card, and rank each skill as to whether they felt the attribute was essential, desirable, less relevant or irrelevant to achieving future success as a veterinarian. Through this card-sorting, the first year veterinary students were able to offer their subjective meaning to the attributes on each card, and by doing so reveal their subjective viewpoint (Van Exel and De Graaf 2005). The students' responses were collated to develop a ranked list of important professionalism characteristics for career success. These cards were based on the Lominger

capability framework cards for recruitment as developed by Lombardo and Eichinger (2004). The wording of some of the Lominger competencies was modified to align more closely with the veterinary profession.

The structured card-sort used in this study was a closed card-sort. Open card-sorts allow participants to order the cards as they see fit, into as many categories as they please, based on any factor they see as significant (Righi *et al.* 2013). In contrast, closed card-sorts require participants to group items into a set number of categories that have been previously defined by the researcher (Righi *et al.* 2013). Closed card-sorts could place constraints on item placement, however, which may not be suitable for uncovering an individual's experiences (Mammen *et al.* 2016). As in this study, the closed card-sort has more often been used to confirm the inclusion of items within an existing domain than to assist in the formulation of one (Chaparro *et al.* 2008; Albert and Tullis 2013).

There was a risk that presenting the students with multiple cards, each containing a description of a different professionalism attribute, could contribute to participant fatigue. It was, however, felt that the card-sort exercise was preferable to a computerised survey as the cards provided a guide to the length of the exercise, with the diminishing pile encouraging the students to continue (Wnuk and Amundson 2003).

To facilitate analysis, the first year respondents in this study were asked to input their card-sort data into a computerised survey following completion of the sorting. While this added to the time taken to complete the exercise, the participants had already made their decisions, and as such the increased duration should not have contributed to any participant fatigue. In fact, the inputting of data into the online survey provided an additional opportunity for participants to revise their sorting.

There are tangible benefits to the card-sort technique reported. The physical nature of cards is appreciated by kinaesthetic learners (Wnuk and Amundson 2003), with one participant in the study of Neufeld *et al.* (2004) describing the exercise as resembling a real card game. Kelly *et al.* (2016) suggested that a

card-sort method gave participants the chance to be more reflective than they would be when undertaking a computerised survey and thus provide choices that are more thoughtful. Furthermore, it has been reported that the visual aspect of the card-sort technique has allowed participants to explore experiences in-depth (Mammen *et al.* 2016). This is important when dealing with students' subjective and personal interpretations of veterinary professionalism. In the present research, students' personal opinions were key, and it would have been inadequate for them to have simply ranked these responses from essential to irrelevant, without comparing the connections between items. This is a strength of the visual mapping component of the card-sort method.

In addition, Mammen *et al.* (2016) noted that visual exercises, such as card-sorts, improved the discourse between the researchers and respondents. Chen and Hsu (2015) found that a card-sort activity proved a successful icebreaker before conducting interviews. It has also been suggested that during group activities, the relationship between participants could be enhanced by card-sort activities (Quintiliani *et al.* 2008). Considering such findings, incorporating card-sort exercises prior to interviews or focus groups could help to build rapport between the researcher and the participants and allow them to become more familiar with the research objectives.

When trying to determine the opinions of participants using a card-sort method, it was important that the language used on the cards themselves was unambiguous. Neufeld *et al.* (2004) recommended that the use of elaborate or uncommon phrases be avoided. This should include the wording of the categories into which participants would sort the cards (Neufeld *et al.* 2004). In the present study, each card contained a veterinary professionalism attribute in bold print with a short sentence beneath that clearly described that attribute. Furthermore, it was felt that the four categories into which the students sorted the cards (essential, desirable, less relevant or irrelevant) were unambiguous.

#### **3.5.3. Survey instruments**

The quantitative aspect of the student research study involved a Likert-scale online survey to ascertain final year veterinary students' perceptions of important veterinary professionalism attributes for future career success. Questionnaire-based surveys represent effective forms of data collection, particularly when attempting to obtain the views and opinions of individuals from a large sample regarding a specific topic (Creswell 2012). Questionnaires permit the collection of information in a standardised manner which, when gathered from a sample of the population, allows the inference of results to the wider population (Rattray and Jones 2007). In a survey, participants respond to a series of questions or statements and these responses are usually then converted into numerical form and statistically analysed. The use of closed-ended questions, requiring the respondents to choose from several fixed options, makes the data easy to collate and analyse statistically (Gummery 2019). Bowling (2014) maintained that the main benefits of this method of data collection are that surveys are usually relatively cheap to set and quick to complete, and analysis is usually straightforward.

Rattray and Jones (2007) and Fink (2017) emphasised the need to adopt a logical, systematic and structured approach to the design and development of a survey or questionnaire. Questions should be generated using many different sources, including a literature review and consultations with subject experts. Bowling (2014) maintained that the research aims should be revisited frequently when generating items to ensure that the questions were relevant to the research objectives.

Furthermore, consideration should be given to the order in which questions are presented. Rattray and Jones (2007) recommended that controversial or emotive items are not presented at the beginning of the survey. These authors also maintained that questions that were leading or were 'double-barrelled' (i.e. touching upon more than one issue yet allowing only for one answer) should be avoided. Furthermore, Bowling (2014) and Gummery (2019) cautioned against creating the conditions for acquiescent response bias. This represents the

tendency for respondents to always either agree or disagree with statements. This bias can be avoided by providing a mixture of both positively and negatively worded questions and statements (Bowling 2014).

Likert-type or frequency scales are commonly used in surveys. These ordinal scales use fixed choice response formats that measure opinions, attitudes or levels of agreement/disagreement (Grove *et al.* 2012; Bowling 2014). The responses usually range from strongly agree to strongly disagree and the inherent assumption is that attitudes can be measured (Rattray and Jones 2007). The respondent is usually offered five to nine responses with the neutral point representing a neither agree nor disagree option. Grove *et al.* (2012) discussed the controversy revolving around whether a neutral point should be offered or not. The neutral option allows respondents to opt out of committing themselves to a definitive position. If no neutral option is offered, however, the respondent could become resentful by being forced to choose a response and this could lead to an increase in non-response bias (Grove *et al.* 2012).

Rattray and Jones (2007) stated that no assumption should be made that equal intervals exist between the points on the scale, although they could indicate the relative ordering of a participant's response. Norman (2010), Grove *et al.* (2012) and Bowling (2014) maintained, however, that it would be acceptable to treat scores from this Likert-scale format as interval data to allow the use of common parametric tests. Such statistical analyses should, however, be determined by the normality of distribution of the data (Rattray and Jones 2007).

In the present study, the depth of the survey was enhanced by including free-text responses or open-ended questions. These allowed the student respondents to expand upon answers and provide more in-depth responses. These more detailed responses exposed important issues that may not have been identified in the quantitative (Likert-scale) part of the survey. While Polgar and Thomas (2013) worried that this approach could make it difficult to analyse and interpret the data, Rattray and Jones (2007) felt that free text comments would be useful to inform future questionnaire development by identifying poorly constructed items.

For the surveys contained in this thesis, extensive pilot work was undertaken to refine the wording and content of the questions or statements. This ensured that questions that lacked clarity or failed to discriminate between respondents were removed. When piloting a survey, Priest *et al.* (1995) insisted that a question should be considered for removal if >80% of respondents endorsed one response or if there was a high level of non-response. This would ensure that the remaining questions promoted a range of responses. Rattray and Jones (2007), on the other hand, argued that sometimes items that are theoretically important for addressing the research question needed to be retained in the survey despite poor response rates.

Further limitations of surveys include the inherent assumption that the respondents interpret the wording of the questions in the same way as the researcher. Even if this is the case, some respondents may not report their opinion accurately. In addition, the use of closed questions could restrict the depth of responses, thus diminishing the quality of the data. Considering this, Bowling (2014) cautioned against the use of survey questions when little is known about a topic. In this case, qualitative methods should rather be employed (Rattray and Jones 2007).

In the present study, first year veterinary students' card-sort responses/rankings were captured by getting the students to record their selection using an electronic questionnaire that listed each of the 57 attributes. Students were asked to rate each attribute using a 1-4 Likert-scale as essential for career success through to irrelevant to career success. Final year veterinary students completed an online survey designed to solicit their opinions on important veterinary professional attributes and the suitability of the current undergraduate veterinary professionalism educational programme. The questionnaire contained closed questions, multiple choice questions, 1-4 Likert-scale questions and open-ended questions. The students were asked to rate each professionalism attribute using the 1-4 Likert-scale as essential for career success through to irrelevant to career success. The survey instrument allowed for open-ended responses in order to determine any additional thoughts, opinions or perspectives from the students.



### **3.5.3.1. Survey reliability**

Reliability is concerned with consistency of the survey instrument. There are three important aspects of reliability to consider when administering a survey:

1. Test-retest reliability: This is the extent to which a respondent would answer in the same manner when repeating the survey (Creswell 2012).
2. Equivalence reliability: This is the extent to which respondents would achieve the same scores on alternative versions of surveys designed to appraise the same views (Vogt 2007; Fink 2017).
3. Internal Consistency reliability: This involves statistical analysis and utilises the Cronbach's alpha coefficient. This coefficient describes how well different survey questions complement each other in their measurement of the same quality or dimension (Fink 2017).

While the first two aspects of reliability were not specifically tested when administering the surveys to first year and final year veterinary students, the Cronbach's alpha coefficient was used to check the reliability of both surveys. These coefficients are reported in Chapters 4 and 5.

### **3.5.4. Focus groups**

Focus groups were established with final year veterinary students to determine their views on professionalism attributes important to career success in veterinary clinical practice and on the suitability of the current undergraduate veterinary professionalism educational programme. An online survey was first used to rank the importance of veterinary professionalism attributes and provide opinions on the effectiveness of the veterinary professionalism programme. The focus groups were then used to generate in-depth discussion on these topics. These focus groups were able to generate data useful to triangulate with the survey-questionnaire data. This study is reported in Chapter 5.

Focus groups or focus group interviews represent a viable option for data collection when attempting to collect shared understanding among several individuals (Creswell 2012). The technique involves a group interaction to discuss

a topic provided by the researcher or moderator. Focus groups encourage interaction among participants and allow synergistic insights into the topic under discussion (Miller *et al.* 2004). The data generated, therefore, reflects the collective rather than the individual view (Gummery 2019). Focus groups also allow participants to change their opinion during the process (Miller *et al.* 2004). In addition, focus groups have the potential to generate new perspectives that were not originally considered by the researcher (Farias 2016). Focus groups, therefore, capitalise on the rich and complex nature of group dynamics and can yield rich results (Kamberelis and Dimitriadis 2005).

In the present study, the focus groups were designed as a semi-structured activity to engage the final year veterinary student participants and create dialogue and meaning. A cohesive sequence to the questions was maintained by using a semi-structured script of appropriate open-ended questions (Appendix 5.B). Using prompt questions, however, posed the danger of imposing topic areas and influencing people's thinking. Joffe (2011) recognised this risk, so proposed discarding the use of prompt questions to gain a more naturalistic inroad into peoples' meaning systems concerning the phenomenon under investigation. Without prompt questions, it would be important for the moderator to ensure that the group remained focused on the study topic (Miller *et al.* 2004).

Group size and composition are important considerations for the focus groups. The group number needs to be sufficient to stimulate open discussion although not so big that the facilitator is at risk of losing control over the process. In the present study, the largest focus group consisted of eight students and the smallest consisted of four students. Braun and Clarke (2013) recommend an optimum number of 3-8 participants.

Diversity was also an important consideration. A group consisting of participants from similar backgrounds and experience could enjoy a sense of familiarity and security when expressing their opinions. This homogenous group could, however, express identical views. In the present study, the student focus groups were heterogeneous, representing people of different ages, gender and cultural backgrounds, which created the opportunity to produce diverse opinions. In

heterogenous groups there exists, however, a greater risk of the group dynamics causing disruptions. This risk can, however, be mitigated through effective facilitation that maintains group focus while keeping the discussion open-ended (Gummery 2019).

Finally, it was important to consider the number of focus groups that should be conducted. A single focus group discussion would only represent the opinion of that group. In the present study, five focus groups were held containing a total of 27 participants. Braun and Clarke (2013) recommended that multiple focus groups should be conducted until saturation has been achieved.

#### **3.5.5. The critical incident technique**

##### ***3.5.5.1. Background of the critical incident technique***

The critical incident technique (CIT) employs similar data collection and analysis techniques used in qualitative methods (including GT) that rely on interviews (Allen 2014). Flanagan (1954) first initiated the CIT as a series of studies intended to recruit competent pilots and improve flight training in the United States Air Force during the Second World War. Flanagan (1954) described the CIT as a set of procedures for the collection of direct observations of human behaviour in a manner that facilitated their potential usefulness in practical problem solving. Flanagan (1954) initially considered direct observation of the participants' behaviour as a fundamental method of data collection for the CIT. He subsequently conceded, however, that recording the narrative of participants' experiences, using rich and descriptive language, represented a more exact and authentic method of CIT data collection (Butterfield *et al.* 2005). It was acknowledged, therefore, that human behaviour could be recorded through the CIT by getting participants to reflect upon an experience (or critical incident) and explain why the experience was important in a particular situation (Reyes 2018).

The CIT quickly extended beyond military applications and has now been applied in business, psychology, counselling, nursing, medicine, social work and education research (Butterfield *et al.* 2005). Currently, the CIT is used as a

qualitative research method in interviews or focus groups to help researchers understand significant occurrences or events identified by respondents, the way they are managed and their perceived effects (Gelderman *et al.* 2016). A key advantage is that the CIT solicits unprompted information that is deemed to be important for respondents (Oldenburger *et al.* 2008). An occurrence qualifies as a critical incident if it is complete enough to permit inferences and predictions, the purpose or intent of the occurrence is clear to the observer and if the consequences of the event are sufficiently definite to leave no doubt concerning its effects (Flanagan 1954). To be critical, an incident should make a significant positive or negative contribution to an activity or phenomenon (Bitner *et al.* 1990).

Qualitative research explores human situations by analysing the written or oral data reported from the perspective of the participants during a study within a natural setting (Creswell and Poth 2017). The CIT is, therefore, a complementary qualitative research method as it collects data as words (based on the perspectives of participants) in critical incident interviews that are then analysed inductively (Reyes 2018). During a critical incident narrative, the researcher's aim is to get the participant to reflect on the course of events, who was involved, the outcome from the event and the causes of the event (Edvardsson and Roos 2001). In addition, the participant should also reflect on how the outcome could have been better or worse (Allen 2014). These critical incidents, therefore, provide a powerful connection to real-life experiences and problems from the participant's perspectives (Vianden 2012).

#### **3.5.5.2. Critical incident methodology**

The CIT, as described by Flanagan (1954) and Reyes (2018), follows five steps:

**1. Determine the aim of the activity (or what the researcher hopes to achieve):** The researcher must create a statement of the aim of the activity without which it would be difficult to convey to participants a clear and uniform idea of the purpose of the study. By defining the aim of the activity, the groundwork for determining what constitutes a critical incident can be laid.

**2. Set plans and make specifications:** The researcher must clearly specify the conditions that address the aim of the activity and the plans for collecting the critical incidents. To achieve this, the researcher must define the situation to be observed, who will be observed, and who will make the observation. The researcher should be an expert in the field of study or, alternatively, should receive specialised training before conducting the research. This specialisation or specialised training is deemed to be necessary for the trainer to be able to show impartiality and consistency when making observations and recording data.

**3. Data Collection:** The CIT could involve two types of data collection: either collected by observation of participants or collected by asking the participants directly to recall incidents from their own lived experiences and memories. The latter method was employed in the present study in Chapter 6. It is important to record the critical incident narratives in precise detail, using accurate and descriptive language. It is also important to collect critical incident data directly from the participant (and not from a manager, teacher or other supervisor) as the participant is better suited to recount their own experiences more accurately (Kain 2004).

Critical incidents could be collected through face-to-face interviews, focus groups, written records and open-ended questionnaires/surveys (Voss *et al.* 2010). Bott and Tourish (2016) described the necessity for the interviewer to develop a rapport of trust with the participants, who may then be more willing to openly discuss sensitive information.

During the critical incident interview, it is important that, in order to avoid the development of researcher bias or contamination, the interviewer does not lead the respondent (Silverman 2004). To find a balance between providing clarity and dialogue without invoking unnecessary response bias, the use of probing questions was used during each interview in this study. For example, for each incident, information such as the setting/context in which the incident took place, the players (clients, other veterinary staff, animals) involved, and why the incident was considered to be effective or ineffective practice was determined (Crouch

1991). The objective was to provoke dialogue and gain an understanding of the incident from the perspective of the individual.

**4. Data Analysis:** Data should be analysed through an inductive process to create a classification pattern. For every critical incident, this pattern needed to describe and summarise the data to preserve the validity, reliability, specificity and comprehensiveness of the data. The CIT analysis must remain practical so that the results can be easily transferrable or reproducible (Flanagan 1954; Reyes 2018)

Flanagan (1954) proposed three steps when analysing data to allow the data to be described in a beneficial way without compromising its validity and specificity. Firstly, the researcher had to develop a frame of reference or classification system. Secondly, the researcher had to create categories (derived from the critical incidents) that reflected that frame of reference. Finally, the critical incidents had to be classified in a logical and continuous sequence from general to specific to create clear and easy to understand categories (Vianden 2012).

**5. Data interpretation and reporting of results:** When reporting CIT data, the amount of information that is included in the report should be determined by the report's purpose. Researchers could include the categories accompanied by a brief description of the classification, or they could provide a detailed explanation for each category (Reyes 2018). The credibility and value of the findings should also be carefully explained at this stage. This would involve reporting only the most relevant findings that confidently answer the initial aim of the study (Flanagan 1954).

Because many CIT applications have focused on behaviour measurements, credibility checks are essential to guarantee the reliability of the data. These include audio-recording the interviews, providing complete transcriptions of the critical incident narratives, continuing to recruit participants until saturation is achieved, evaluating researcher bias and employing independent analysis of the thematic analysis (TA) to check the coding and theme development (Butterfield *et al.* 2009).

#### **3.5.5.3. *Strengths and advantages of the critical incident technique***

Hopkinson and Hogarth-Scott (2001) described the CIT method as being governed by a flexible set of rules that could be modified to meet the requirements of the topic being studied. With the CIT, the data collected emerges from the respondents' perspectives in their own words. Respondents are, therefore, permitted to determine which incidents are most relevant to them for the phenomenon being investigated (Gremler 2004). The context, therefore, can be developed entirely from the respondent's perspective (Chell and Pittaway 1998). During an interview, respondents can be asked to recall specific events and can use their own terms and language (Gremler 2004).

The inductive nature of the CIT makes it particularly useful for research on topics that have been sparingly documented (Grove and Fisk 1997). The CIT can also be effective as an exploratory method to increase knowledge about a little-known phenomenon (Gremler 2004).

#### **3.5.5.4. *Drawbacks and limitations of the critical incident technique***

There is the potential for respondents' stories reported in critical incidents to be ambiguous, misinterpreted or misunderstood (Gabbott and Hogg 1996). In addition, since the CIT is a retrospective research method, the research could be affected by the respondents' recall bias or memory lapses (Michel 2001). This may lead to criticism of the CIT's reliability and validity (Gremler 2004; Bott and Tourish 2016). The CIT method relies on participants' memories and requires the accurate and truthful reporting of the critical incidents, even if the event occurred many years previously. In addition, the nature of the CIT data collection process requires respondents to provide detailed descriptions of their critical incidents, but participants may not be accustomed to or willing to invest the time to tell their complete story (Edvardsson and Roos 2001).

To mitigate some of the concerns outlined above, some authors have recommended that participants be asked in advance to think about the critical incidents they wish to discuss (Bott and Tourish 2016). Some interviewees may otherwise arrive at the interview and have trouble recalling the incidents to

discuss. In addition, valuable interview time could be lost while the participant ponders which incidents they wish to describe with in-depth responses (Schluter *et al.* 2008). In the present study, the risk of this problem arising was minimised by sending the principles of the CIT method to each participant a few days before the interview, accompanied by a brief description of what they would be asked to divulge. This process was suggested in two prior studies (Bradley 1992; Schluter *et al.* 2008). Despite this, some participants struggled to recall a positive critical incident during the interviews and needed prompting and encouragement before they could recollect events and provide descriptions of the sequence of events.

Some authors have recommended allowing only critical incidents that had occurred within the past year to be discussed by the participants (Wolff *et al.* 2002; Druskat and Wheeler 2003; Kvarnström 2008). This would overcome the limitation of recalling past events. However, when Flanagan (1954) developed the technique, he considered that adequate coverage could not be obtained if only very recent incidents were considered. No time limitation was imposed in the present study and some of the veterinarians narrated incidents that had occurred 10 to 20 years previously. Nonetheless, the critical incidents reported in this study represented some of the veterinarian's most significant positive and negative experiences and, as a result, the incidents were likely to have been faithfully recalled by the participants.

In addition, the literal accuracy of the incidents recalled in this study were less important than the significance that the veterinarians attributed to them. In this regard, Gabriel (2000) described the challenge faced by researchers to engage with the meaning that participants attribute to stories rather than become preoccupied with their factual accuracy. The *verbatim* stories generated from the critical incident narratives in this study provided powerful and vivid insights into important veterinary professionalism attributes from veterinary clinical practitioners' perspectives. The CIT was, therefore, a suitable research method to incorporate into this mixed methods research study and proved to be an invaluable tool to assist in this phenomenological research design. The CIT provided a clear pathway to the exploration of the experiences of veterinarians



interacting with their clients. This contributed to the discovery of important professionalism attributes for veterinary career success.

Finally, concern has been registered over the use of the term critical in this methodology (Keatinge 2002). It was suggested that 'critical' could be replaced with the terms 'revelatory' or 'significant' (Norman *et al.* 1992; Keatinge 2002). These authors felt that these alternative terms were less intimidating than the term critical, and better described the more common incidents that were usually the focus of health science research. In the present research, however, no participants expressed any discomfort on being asked to narrate a critical incident. Nonetheless, Keatinge (2002) insisted that replacing the term critical with something more constructive would render this technique even more universally useful.

#### **3.5.6. Use of thematic analysis for data analysis**

Thematic analysis provides a systematic framework for coding qualitative data, which can be used to identify patterns across the data set in relation to the research question (Braun and Clarke 2014). This form of data analysis focuses on those identifiable themes and codes that represent human life and behaviour (Aronson 1995). Codes are ways of assigning units of meaning to descriptive information (Miles and Huberman 1994). Coding is an analytic process that captures both the surface semantic meaning within the data and the underlying latent meaning, rather than a method of data reduction (Braun and Clarke 2014). Themes are analytically constructed from the coding and capture the broader patterns of meaning within the data (Braun and Clarke, 2014). The goal, therefore, of TA is to turn raw descriptive data into codes and themes (Corbin and Strauss 2014).

Braun and Clarke (2014) emphasised, however, that themes did not simply emerge from the data. Instead, the researcher's role should be active and reflexive, with interpretative choices needing to be made to generate codes and construct themes. Through TA, the most salient "*constellation of meanings*" present within the data set are highlighted (Joffe 2011 p 209). Thematic analysis

determines which themes are important to describe the phenomenon under study.

#### **3.5.6.1. Approaches to thematic analysis**

Boyatzis (1998), Guest *et al.* (2011) and Joffe (2011) described two broad approaches to TA. The 'small q' approach remains within quantitative (post-) positivist research and involves developing a structured coding framework that is applied to the entire data set. This approach adheres to the positivist concept of reliability and inter-rater reliability (using multiple independent coders) to ensure the coding is accurate. The analytic process discovers themes that already exist within a data set. The TA utilised in this study, however, adopted a 'big Q' approach (Boyatzis 1998; Guest *et al.* 2011; Joffe 2011). This approach operates within a qualitative paradigm characterised by an organic process of coding and theme development allowing theoretical flexibility. The analytic process is creative, resulting from an engagement between the data set and the researcher's interpretative skills (Braun *et al.* 2014).

#### **3.5.6.2. Stages of thematic analysis**

Two stages of TA have been described: First, the data are analysed using codes/subthemes/themes developed from the participant data. Miles *et al.* (2014) referred to this stage as the 'emic' phase, which involves trying to capture the descriptions and meaning of the participants. This repeated process of reading and analysing the data generates groups of codes that are informed by the actual words ('exemplar statements') of the participants. Words and phrases are then generated that capture the meaning of segments of this data. These meanings are then compared for similarities and differences and collapsed into codes that help to guide analysis of other segments of the data (Allen 2014). Secondly, the 'etic' phase involves analysing the data using codes/subthemes/themes derived from prior research (Miles *et al.* 2014). These two stages were used in the present study.

#### **3.5.6.3. *Theoretical underpinnings and epistemological assumptions of thematic analysis***

Thematic analysis has been described as a phenomenological method based on traditional content analysis but extended beyond observable material to more implicit thematic structures in which more tacit meanings are analysed (Joffe 2011). Guest *et al.* (2011) and Joffe (2011) argued that TA fitted well with the assumptions of social phenomenology. On the other hand, Clarke and Braun (2014) presented TA as an analytic method rather than as a methodology. Braun *et al.* (2014) argued that TA did not necessarily provide a theoretically informed framework to collect and analyse data but instead focused on theoretical flexibility that could be used within a wide range of epistemological frameworks.

According to Joffe (2011) and Lundgren *et al.* (2016), TA can be performed using realist, constructionist or contextualist approaches. A realist approach records the experiences and meanings expressed by each subject. A constructionist approach reports the different discourses the participants used and interprets what they said as an example of a particular discourse used to justify their experiences. This approach assumes that the way the respondents engaged with a particular issue are socially constructed. Thus, the content of the participants' thoughts and feelings are the focus without necessarily considering the reality of the issue (Joffe 2011). The concern, therefore, is not with the accuracy of the representation but with the meanings the respondents attach to the issues and with the consequences of such meanings for themselves. Joffe (2011) has maintained that TA serves as a useful tool to illustrate the process of social construction as research participants' accounts contain threads of the social thinking in which they are embedded. A contextualist approach lies between realism and constructionism and interprets how the respondents construct meanings and how the social context influences these meanings (Lundgren *et al.* 2016).

#### **3.5.6.4. *Inductive versus deductive thematic analysis***

Categories may be generated using an inductive or deductive approach. In the inductive approach, there are no preconceived categories and instead the

categories emerge gradually from the data. In this approach coding and analysis starts 'bottom up' from the data. In the deductive approach, the data are used to corroborate pre-existing categories so coding and analysis starts 'top down' from prior research and theory (Pope *et al.* 2000; Braun *et al.* 2014). Inductive TA aims to ground analytical observations in the data rather than in prior theory. Deductive TA, on the other hand, codes data to seek evidence of a particular concept or theory or uses existing theories to add depth to the interpretation of data (Braun *et al.* 2014).

Joffe (2011) maintained that, while deductively derived themes allow one to extend or refute existing research, there is no point in conducting a qualitative analysis without drawing on the naturalistic themes that emerge during inductive analysis of the data. Braun *et al.* (2014) believed, however, that the researcher's viewpoints and prior assumptions, and the ontological, epistemological and theoretical frameworks work together to prevent the practice of pure inductive TA.

In the present study, the TA was both deductive and inductive, as the data were approached with certain preconceived categories derived from theories, but the researcher also remained receptive to new concepts that emerged. Joffe (2011) emphasised that this approach could accommodate findings that did not fit with previous theoretical frames and, therefore, contained the potential to revolutionise the knowledge around the subject being investigated.

#### **3.5.6.5. *The thematic analysis process***

Thematic analysis was applied to the following data in this study:

- Transcripts of the final year veterinary student focus groups (Chapter 5);
- Transcripts of positive and negative critical incident interviews conducted with clinical veterinary practitioners (Chapter 6);
- Transcripts of clients' complaints, and the veterinarians' official responses to these complaints, submitted to the VCNZ during 2014-2016 (Chapter 7).

Thematic analysis followed a six-step process as described by Braun and Clarke (2006; 2014):

**1. Gain familiarity with the data:** through reading and re-reading the transcribed data and ensuring that the transcribed data represents an accurate representation of the interview. Initial analytic observations about the data should also be recorded, and avenues for further potential exploration noted.

**2. Generate initial codes:** by coding distinctive features of the data across the entire data set. This involves coding the data in a thorough and systematic manner to create a coding frame. These evolving codes capture features of the data relevant to the research question (it is essential to ensure that each data item has been given equal attention during the coding process). Coding can develop based on both inductive codes, which are grounded in the data content, and theory-driven codes, which are directed by past research in the area. In this way, the coding frame should be able to answer the research question(s) in a balanced manner (Joffe 2011).

Specific strategies inherent in GT data analysis include open and axial coding (Glaser and Strauss 1967). In the initial stages of the analysis, open coding involves dissecting the data and delineating the data into categories. In the latter stages, axial coding involves looking at the context of the categories and making connections between them (Allen 2014). Axial coding allows one to understand the behaviours and interpretations of the phenomenon under study revealed by the research participants (Allen 2014).

**3. Search for themes:** by collating the codes into categories. This involves collating the codes (and the data relevant to each code) and then generating a set of themes. Codes need to be re-examined and similar ones clustered to form themes. Combined, these themes should tell a cohesive narrative relating the data to the research questions. This third phase should end with the development of a set of candidate themes with all the relevant coded data collated for each theme (Clarke and Braun 2014).

**4. Review the candidate themes:** by checking that the coded data fit with the developed themes and then by reviewing the themes against the full original data set. This ensures that the themes capture the most relevant features of the data.

**5. Generate definitions of, and a name for, each theme:** by refining the specifics of each theme and the overall narrative that emerge from the analysis. Defining the themes should involve development of a comprehensive narrative describing the scope and boundary of the theme and how the theme is related to other themes as well as to the research question. High frequency themes should be explored in-depth, but occasional responses should not be ignored as they could articulate an issue that other participants had taken for granted or found difficult to voice (Joffe 2011). The name of each theme should be concise and capture the essence of the theme. A thematic map can be developed which figuratively represents the relationship between themes (and codes).

**6. Produce a scholarly report of the analysis:** by assembling, organising and editing the themes with the relevant selected data extracts. The data extracts need to provide clear and compelling evidence to support any analytic claims. There should be a transparent trail in the TA that shows how the data were selected and analysed (Joffe 2011).

#### **3.5.6.6. Checking the reliability of the coding frame**

There has been debate regarding the use of reliability statistics in TA of data. Gremler (2004) argued for the use of some form of inter-rater reliability index and has suggested that the paucity of reports on the use of such indices in the literature may be a reflection of poor index scores. On the other hand, Pope *et al.* (2000) argued that reliability indices are irrelevant to qualitative data, inasmuch as the interpretation of the data is determined by rater-specific factors as well as data-specific factors. Furthermore, Braun and Clarke (2006) maintained that coding would inevitably be influenced by the researcher's perspective. Specifically, the critical realist approach to coding dictates that there cannot be one single 'reliable' coding method; therefore, the concept of inter-rater reliability becomes unrealistic. Yet even within this critical realist approach, there is an

assumption that there is an accurate reality within the data that can be captured through coding. Hence, Joffe (2011) considered that the level of agreement between the applications of the code and the data set by each independent researcher should be calculated to increase the transparency of the coding frame. She suggested that 10-20% of the data should be coded independently, and that there should be an inter-rater reliability score (or degree of concordance) of >75%.

In the present study, the reliability of the coding frame was estimated by having two co-researchers code a substantial portion of the data set independently and any differences in interpretation were resolved to consensus through iterative discussion between all three investigators.

### **3.6. Validity of the research**

Validity refers to the truth or accuracy of the research study and is dependent on reliable and valid instruments of measurement (Farias 2016). When evaluating the strength of interpretations and claims made in research, it is important to focus on the areas that are most likely to threaten the plausibility of the study. For the present research, the potential threats identified included researcher bias, using Likert-scale responses as interval data, and acquiescent survey response bias. Details of how each of these were managed have been provided in the Methods section of each chapter. Their implications when presenting the findings have also been discussed in each chapter. Here, however, details of the candidate's background and influences are provided and used to explain whether they might have affected the research validity.

The candidate undertook this study as the Co-ordinator of Veterinary Professionalism Studies in the School of Veterinary Science at Massey University and developed the professionalism teaching programme that has been embedded across all five years of the primary veterinary curriculum. This includes instruction in communication skills, which involves students engaging in simulated consultations with actors playing clients. Scenario-based learning opportunities have also been provided for students to develop their veterinary

business acumen and to gain an understanding of the Veterinary Council of New Zealand (VCNZ) Code of Professional Conduct that governs ethical behaviour within the veterinary profession. Wellbeing initiatives have also been embedded throughout the curriculum to ensure that students are equipped to cope with the notoriously demanding nature of the primary veterinary programme. The candidate developed this curriculum through the development of content and teaching methods informed by thoroughly reviewing the literature on professionalism in the health sciences. The candidate has also benefitted from collegial support from contemporaries teaching established veterinary professionalism training programmes at universities in Australia and the United Kingdom.

The candidate was, therefore, clearly invested in this research and brought to it preconceived ideas and biases about the teaching of veterinary professionalism, informed by personal experiences, prior research and interactions with colleagues. It was, therefore, essential for the candidate to acknowledge potential biases in the collection and analysis of data in this research project. Biases in data collection and analysis could result from the candidate's personal values about what was right and wrong and from expectations of what the results should be. There was, therefore, the potential that the candidate could manipulate the research methods and extract from the data the information which most suited the candidate's preconceived ideas on veterinary professionalism.

Fischer (2009) has described bracketing as the process in which researchers identify their values and assumptions that could influence how they collect and view the data. The bracketing activities employed in this research included reflecting on and identifying any biases that the candidate may have developed from previous literature reviews. A concerted effort was then made to ensure that the findings represented a true reflection of the participants' descriptions and perceptions. In addition, a careful and systematic approach to the research was undertaken. The survey instruments used to solicit student opinion were carefully constructed to maximise their reliability and content validity. Questions were generated using many different sources, including a literature review and consultation with subject experts. Questions that were leading or double-barrelled



were avoided. Acquiescent response bias was minimised by providing a mixture of both positively and negatively worded questions and statements.

For the TA studies of final year veterinary students' focus groups and the veterinary practitioners' critical incident narratives, *verbatim* transcripts were used which had been checked for accuracy against the audio recordings and which participants had checked for accuracy and corrected if necessary. Furthermore, the audio recordings were accessed during coding to clarify meaning if necessary. Coding was performed openly and systematically, and observational memos were written during data collection and analysis to record personal feelings and to justify theme development. Memo writing represents a means of capturing thoughts that occur during the data reduction stages and the development of the final themes (Miles and Huberman 1994). At the end of the whole process, the coding was cross-checked with the entire data set to ensure that the coding was an accurate representation.

Peer review was also used as an external check of the study findings (Allen, 2014). This involved presenting the findings to the candidate's supervisors and to a group of colleagues in the veterinary professionalism discipline (at Murdoch University in Australia and the University of Nottingham in the United Kingdom). Their feedback gave an indication on the suitability of the interview methods and credibility of the TA of the interview transcripts. The peer feedback helped the candidate to understand how readers would respond to the themes developed from the focus groups and the critical incident narratives.

Although the assumptions and biases of the candidate could never be fully eliminated, the candidate had at least reflected on them and was aware of their possible influence on the research. By taking the careful and systematic measures outlined above, the candidate was able to limit their effects and thus hopefully produce meaningful findings that would benefit veterinary education and the veterinary profession overall.

### **3.7. Ethical considerations**

It was important to identify and address the potential ethical issues inherent in the studies reported in this thesis. Confidentiality, consent and the unequal power relationship implicit in research with the candidate's own students were identified as the major ethical issues. Human ethics approval was obtained from the Massey University Human Ethics Committee for each study after every ethical issue inherent in the research had been identified and appropriately addressed (Chapter 4: *MUHEC Southern A Application – 14/54*; Chapter 5: *MUHEC HEC: Southern B Application 17/31*; Chapter 6: *MUHEC Low Risk Notification: 4000017054*; Chapter 7: *MUHEC Low Risk Notification: 4000016302*).

In the focus group study (Chapter 5) and the critical incident study (Chapter 6), all participants were required to sign a consent form (Appendix 6.B) with the assurance of confidentiality outlined in the accompanying information sheets (Appendix 5.C and 6.C). The information sheet also explained each study's purpose and the further rights of the participants. All participant information, survey responses, audio recordings of focus groups and critical incident interviews, and transcripts of recordings were anonymised and kept in password-protected files on a secure computer. For the client complaints study reported in Chapter 7, full access was granted by the VCNZ to uncensored electronic records of all complaints laid against veterinarians from 1992 to 2016. Considering the extremely sensitive nature of this material, a confidentiality clause was signed with the VCNZ and the candidate was further bound by the Privacy Act of New Zealand to anonymise all information before reporting on it. The identity of complainants and respondents remained strictly confidential and measures were taken to ensure that there could be no negative impact upon any individual's professional reputation. Furthermore, all complaints data was returned to the VCNZ for safe keeping at the conclusion of the research. Any notes which arose from the TA of this data were carefully anonymised and stored in password protected files.

Finally, in order to facilitate an open and honest research relationship, the candidate maintained a level of respect and trust throughout the research

process. Advice was sought from the Kaiārahi Māori, School of Veterinary Science, who identified no special risks for Māori veterinary student participants in the research reported in Chapters 4 and 5. The candidate attempted to create a safe environment in which to conduct the focus groups and the critical incident interviews and made provision for these interviews to be abruptly terminated if the veterinary students or veterinarians felt too uncomfortable to proceed (this, however, did not happen in any of the two studies). To ensure confidence and encourage full disclosure, all participants were assured that the details of the discussion would be anonymised, and strict confidentiality maintained. In addition, the transcripts of interviews were returned to participants to check for accuracy.

## **4. The perceptions of first year veterinary students on veterinary professionalism attributes important to future success in clinical practice**

### **4.1. Overview**

This chapter addresses the first research question; namely, what are the perceptions of first year veterinary science students on the professionalism attributes important to veterinary career success in future clinical practice?

This question was addressed through a quantitative study using capability framework cards. Since the use of capability framework cards has not been widely reported in veterinary educational literature, the Methods section considers how the capability framework card attributes were developed, and the data collection technique around their use. In addition, the descriptive and inferential statistical methods used to analyse the capability framework card data are discussed.

The Results provide a snapshot of first year veterinary students' opinions on veterinary professionalism and include the rankings of the important attributes of professionalism as perceived by the students. The chapter represents a novel approach to garnering opinion from newly enrolled veterinary students; a group of stakeholders whose views on this subject are very seldom sought.

### **4.2. Introduction**

Whilst veterinary curricula have traditionally focused on education in the domain of clinical skills and knowledge, it is now evident that a holistic veterinary curriculum needs to incorporate a dedicated syllabus of veterinary professionalism integrated longitudinally throughout the programme (Birden and Usherwood 2013). Prior to the introduction of a formalised syllabus, professionalism education was either an informal process, or a product of the

hidden curriculum and there was an expectation that students would assimilate appropriate professionalism attitudes and behaviours by observing role models, and through relationship-building within clinical settings (Lewis and Klausner 2003; Zenner *et al.* 2005; Hess-Holden *et al.* 2019).

There is a paucity of extant literature on how veterinary students view professionalism in general as well as within their degree programme. Mossop (2012a) argued that students' opinions are invalid within research on veterinary professionalism, and that their opinions should be confined to the educational environment. A rather different stance was taken by Grogan (2013), however, in her work with medical students. She considered that it is important to understand medical students' opinions on professionalism in order to take those opinions into consideration in the development of medical professionalism curricula. Given that medical students have demonstrated a desire to transform medicine from a culture of financial and power struggles towards a more compassionate approach focused on patient care (Grogan 2013), students' voices represent a powerful force in shaping the altruistic and ethical values, attitudes and behaviours required of the medical (and veterinary) professions.

Similarly, Birden and Usherwood (2013) conducted focus groups on professionalism with senior medical students from three Australian medical schools. These students identified communication skills, ethics and comportment as key professionalism attributes. The views of preclinical students about professionalism have, however, rarely been the focus of medical or veterinary education research (Baernstein *et al.* 2009; Grogan 2013). Instead, research has focused on the learning of professionalism skills by more senior students within the clinical context of the final years of study (Grogan 2013). Maudsley *et al.* (2007) felt, however, that junior medical students, who have not had direct clinical contact, lacked the ability to fully appreciate the importance of professionalism. Even so, despite their lack of clinical experience, first year students still possess life experiences and insights that could promote improvement in practice and programmes related to the development of professionalism (Finn *et al.* 2010; Grogan 2013). Capturing these experiences and insights, at the beginning of the students' undergraduate programme, could be even more pertinent given that

Cordingley *et al.* (2007) demonstrated a potential decline in levels of moral reasoning ability and ethical sensitivity as students progress through medical school.

Accounting for preclinical students' opinions when shaping a curriculum results in greater student ownership of decision-making, and greater engagement with the programme (Clarke *et al.* 2019). By seeking the perspectives of preclinical students, the body of knowledge about professionalism may be extended and the teaching and learning experience of these students enhanced (Finn *et al.* 2010). It is possible for this dialogue to facilitate institutional reform prioritising professionalism within a positive learning environment, and to help motivate faculty to evaluate and expand their own perceptions and understanding of professionalism (Grogan 2013).

This study was, therefore, undertaken to determine the opinions of newly enrolled, first year veterinary students on key attributes of professionalism.

### **4.3. Methods**

#### **4.3.1. Capability framework cards**

First year veterinary students in 2014, 2015 and 2016 were asked to play a closed, structured card-sort game in order to gain insight into their opinions on veterinary professionalism. The intention of this exercise was to gain an understanding of the perspectives of newly enrolled veterinary students, who were largely unfamiliar with the veterinary profession and had yet to receive any formal instruction in veterinary professionalism.

The card-sort game was played during the introductory session of the Veterinary Professionalism Studies course (227.114) for the 2014, 2015 and 2016 first year intakes at Massey University. Students in each intake were asked to review 57 purpose-designed capability framework cards, each containing the description of a different professionalism attribute (Figure 4.A). Three broad sets of attributes were presented: self-oriented (with 19 attributes listed consecutively on cards 1-19), task-oriented (with 17 attributes listed on cards 20-36) and people-oriented

(with 21 attributes listed on cards 37-57) (Appendix 4.A). These cards were based on the Lominger capability framework cards for recruitment as developed by Lombardo and Eichinger (2004). The wording of some of the Lominger capability attributes was modified to align with attributes of veterinary professionalism. All respondents were presented with the same 57 attributes, and attributes were presented in the same order to every student. The card-sort was initially piloted on three third-year veterinary students and two academic staff members prior to the study. This was to solicit feedback on the wording of each attribute and to determine the average length of time taken to categorise all 57 cards.

### 22. PROBLEM SOLVING

Uses rigorous logic and methods to solve difficult problems with effective solutions; probes all fruitful sources for answers; looks beyond the obvious and doesn't stop at the first answers.

Task

**Figure 4.A:** An example of one of the capability framework cards containing a description of a task-oriented professionalism capability.

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Participants were asked to rate the importance of each attribute to future career success by placing each card into one of four groups. The groups were labelled 'essential', 'desirable', 'less relevant' or 'irrelevant'. This represented a form of hierarchical card sorting (Neufeld *et al.* 2004) and allowed each student to express their viewpoint for each attribute. At the conclusion of the card-sort, students recorded their ratings for each card electronically using an online survey tool that listed each of the 57 attributes. For each attribute, a four-point Likert-scale (4: essential; 3: desirable; 2: less relevant and 1: irrelevant) was provided to capture responses.

Responses were collated to develop a ranked list of attributes based on mean scores. Data were collected on students' gender (female/male), age (<20-year-old/≥20-year-old) and ethnic background (New Zealand [NZ] European/Other) allowing exploration of the student responses by these demographic variables.

Students from ethnic backgrounds other than NZ European included Māori, Pacific, Chinese, Taiwanese, Korean, Singaporean, Japanese, Vietnamese, Filipino, Indian, Middle Eastern, Latin American, African and Europeans from other countries. There were however too few individuals within each of these groups to analyse them separately.

#### **4.3.2. Ethical approval and informed consent**

Since respondents were asked to capture their card selections electronically using an online tool, issues of risk, consent, privacy, confidentiality and anonymity had to be carefully considered. Data storage security was also a paramount concern. These issues were addressed, and the project was approved by the Massey University Human Ethics Committee (MUHEC Southern A Approval - 14/54).

#### **4.3.3. Data analysis**

The survey data were analysed using descriptive and inferential statistics. Gender distribution, age groups and ethnic background were summarised and expressed as proportions for each of the three years (2014, 2015 and 2016).

The four Likert-type descriptors were converted to numerical responses (4: essential; 3: desirable; 2: less relevant; 1: irrelevant to future career success). These data were considered as ordinal data, as it could not be assumed that there were equal intervals between categories. The median score for each attribute was initially examined as a measure of the relative importance of each attribute, but this did not capture sufficient detail: across participants, the median scores for most items were between 2 and 4 on the four-point scale. Accordingly, results for the Likert-scale questions rating the importance of 57 veterinary professionalism attributes were presented as arithmetic means instead. Treating Likert-scale responses as interval data is justified when the aim is to compare the relative importance of items (Norman 2010). Responses for each attribute from each set were, therefore, ranked and displayed as bar charts using arithmetic means.



The internal consistencies of the self-oriented, task-oriented and people-oriented sets of items were demonstrated using the Cronbach's alpha ( $\alpha$ ) statistic (Fink 2017). This statistic describes how closely related the items are within each set. Cronbach's  $\alpha$  was reported for each set of attributes rather than for the entire questionnaire (Rattray and Jones 2007). Cronbach's  $\alpha$  ranges from 0 when the measures are completely unrelated to each other through to 1.0, when items correlate with one another exactly (Vogt 2007). A Cronbach's  $\alpha$  of  $\geq 0.70$  was regarded as satisfactory (Vogt 2007) in the present study.

The Kruskal-Wallis test for independent samples was used to compare the median scores for first year veterinary students' responses to the self-oriented, task-oriented and people-oriented attributes between years (2014, 2015 and 2016). The Kruskal-Wallis test is a non-parametric test that assesses whether more than two independent groups differ. This test is the non-parametric equivalent of the one-way independent ANOVA (Field 2017) as a comparison was being made of more than two groups (years: 2014, 2015 and 2016) based on one dependent variable. Since the Kruskal-Wallis test represents an omnibus test statistic, it cannot determine which groups of the independent variable (i.e. years: 2014, 2015 and 2016) were significantly different from each other. Using the Kruskal-Wallis test, a significant result only indicates that at least two groups were different. To determine which years differed from each other, the Dunn post hoc test was used.

Mann Whitney U tests were used to compare the median scores for students' responses to the self-oriented, task-oriented and people-oriented attributes between gender (female/male), ages (<20-year-old /  $\geq$ 20-year-old) and ethnic backgrounds (NZ European/Other). The Mann Whitney U test is a non-parametric test that compares whether two independent groups differ. This test is the non-parametric equivalent of the independent samples t-test (Field 2017). For all comparisons, the null hypothesis was that there was no difference between each set of attributes by year, gender, age or ethnicity. Data were analysed using IBM SPSS Statistics version 25. For all analyses, the level of significance was set at  $p \leq 0.05$ .

## 4.4. Results

### 4.3.1. Summary statistics

A total of 330 first year students participated in the card-sort activity: 101 students in 2014, 104 students in 2015 and 125 students in 2016. Respondents with >3 missing responses across the 57 attributes were eliminated. Using this criterion, two responses in 2014, seven responses in 2015 and five responses in 2016 were excluded, leaving a total of 316 responses. Table 4.A shows the demographic breakdown of the respondents by age, gender and ethnic background. In 2016, one respondent did not specify her/his age.

**Table 4.A:** First year student respondents (number and percentage) by age, gender and ethnic background for 2014-2016.

Demographic data		Year					
		2014		2015		2016	
		n	%	n	%	n	%
<b>Age*</b>	<20-years	59	60	59	61	90	75
	≥20-years	40	40	38	39	29	24
<b>Gender</b>	Female	75	76	78	80	95	79
	Male	24	24	19	20	25	21
<b>Ethnic background</b>	NZ European	65	66	69	71	80	67
	Other	34	34	28	29	40	33

Means, medians and percentages for each item are shown in Appendix 4.B.

### 4.3.2. Internal consistency/reliability of the card-sort game

Table 4.B shows Cronbach's  $\alpha$  values for all sets of data for each year and across all three years. In 2014, the internal consistency of all three scales was marginal. Improvements were noted over subsequent years as the card-sort instructions were made clearer. Nonetheless, based on  $\alpha$  scores, data from 2014, and self-oriented attributes from 2015, should be interpreted with a degree of caution.

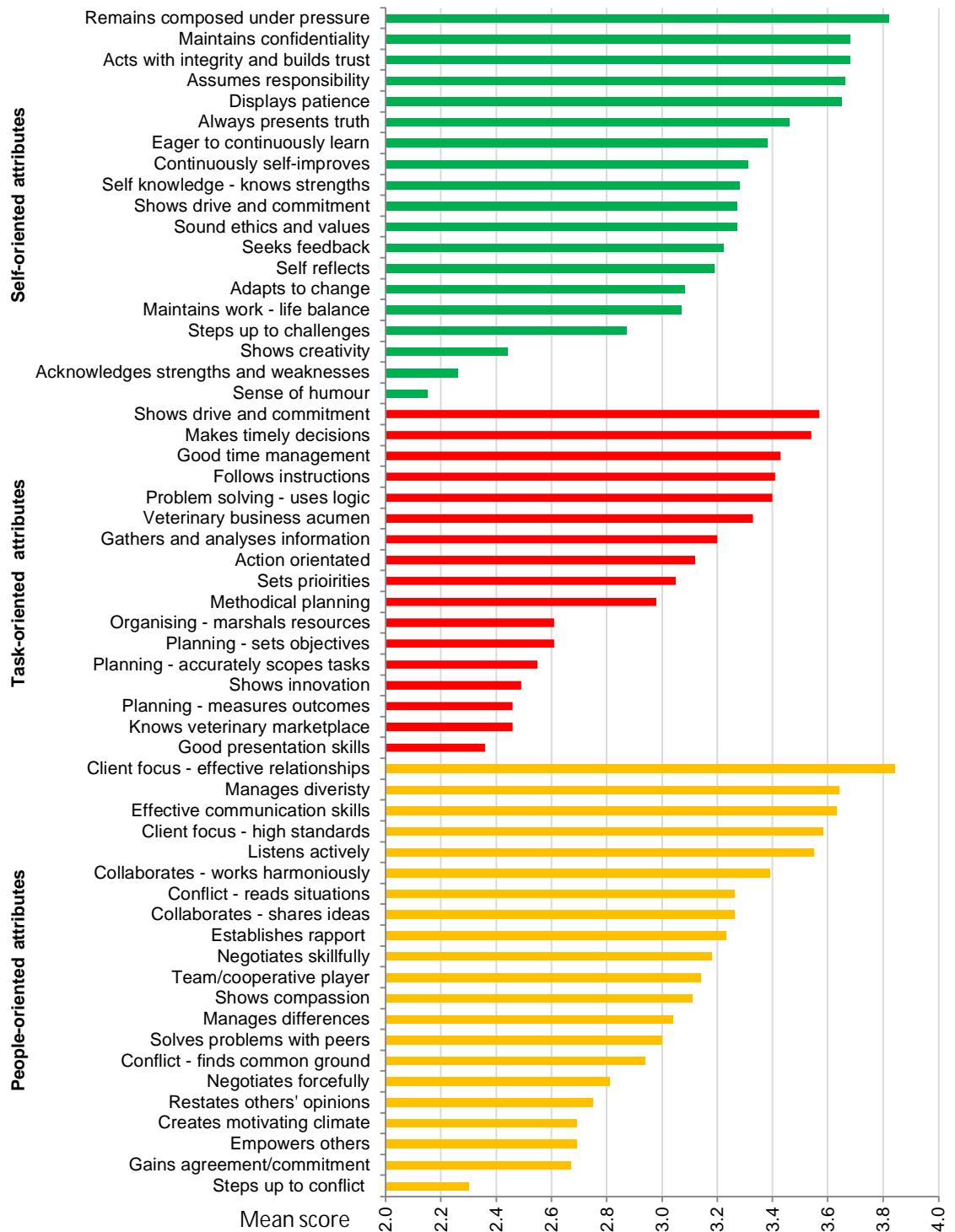
**Table 4.B:** Cronbach's alpha ( $\alpha$ ) for each set of attributes for each year and the overall  $\alpha$  for each set for all three years combined.

Year	Set of attributes	$\alpha$
2014	self-oriented attributes	0.578
	task-oriented attributes	0.498
	people-oriented attributes	0.612
2015	self-oriented attributes	0.436
	task-oriented attributes	0.717
	people-oriented attributes	0.695
2016	self-oriented attributes	0.775
	task-oriented attributes	0.794
	people-oriented attributes	0.853
2014-2016	self-oriented attributes	0.676
	task-oriented attributes	0.751
	people-oriented attributes	0.797

#### 4.3.3. Ranking of attributes

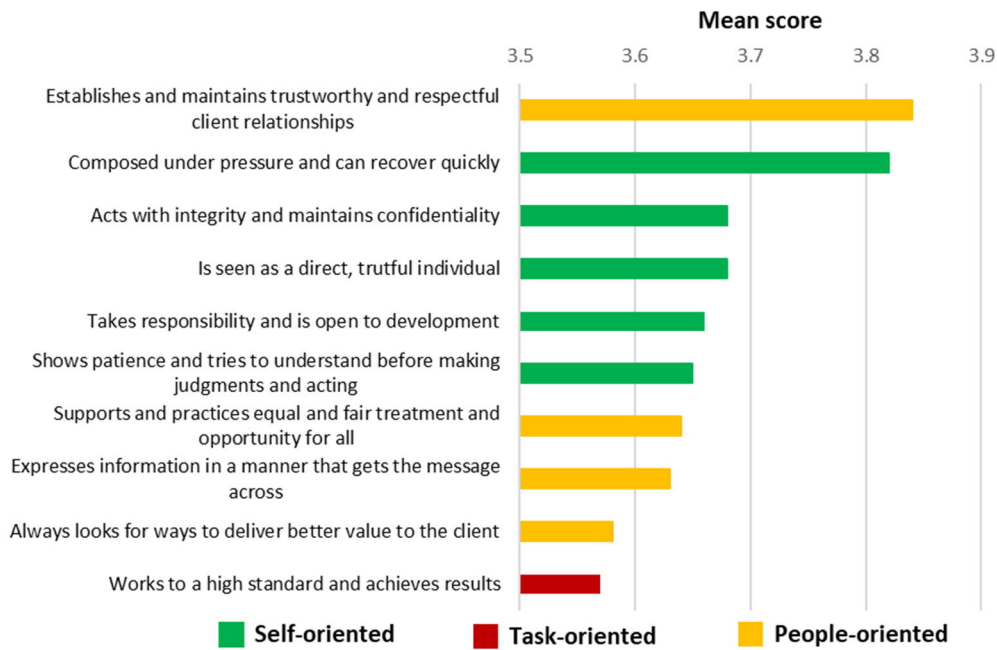
Figure 4.B shows the means of the self-oriented, task-oriented and people-oriented attributes ranked from highest to lowest. Figure 4.C shows the ten most important attributes based on the mean score for each attribute. The three highest rated attributes included client focus ('Establishes and maintains trustworthy and respectful client relationships'), self-management ('Composed under pressure and can recover quickly') and integrity and trust ('Acts with integrity and maintains confidentiality'). Figure 4.D shows the ten least important attributes based on the mean score for each attribute. The three lowest-rated attributes included humour ('Has a positive and constructive sense of humour'), personal disclosure ('Openly shares about strengths, weaknesses, personal beliefs and feelings') and conflict management ('Steps up to conflicts, seeing them as opportunities').

#### 4. First year veterinary students

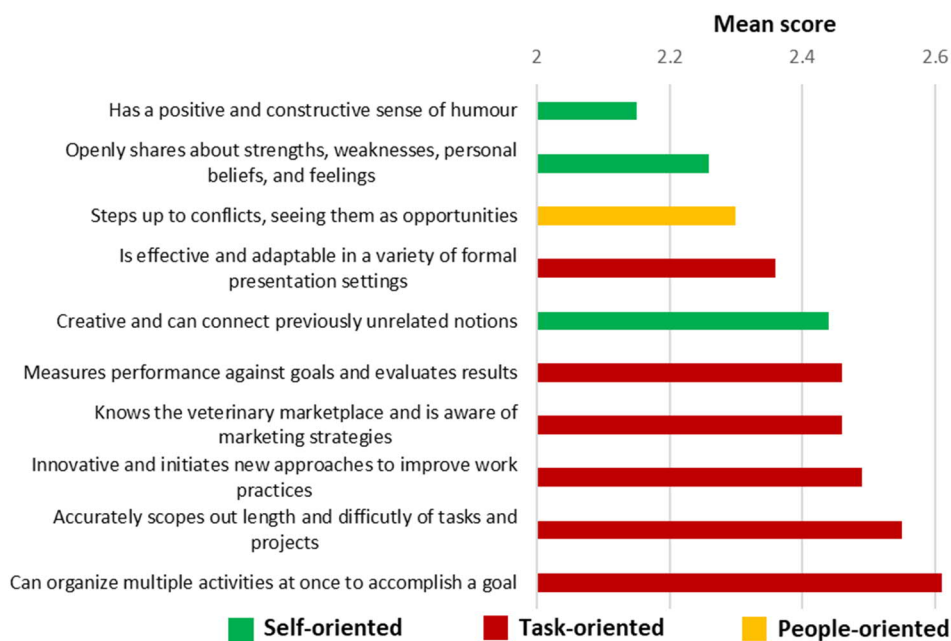


**Figure 4.B:** The mean scores of the first year veterinary students' responses for the self-oriented, task-oriented and people-oriented veterinary professionalism attributes for 2014-2016.

#### 4. First year veterinary students



**Figure 4.C:** The ten most important professionalism attributes selected by first year veterinary students ranked by the mean score for each attribute.



**Figure 4.D:** The ten least important professionalism attributes selected by first year veterinary students ranked by the mean score for each attribute.

#### 4.3.4. Comparison of demographic variables

A significant effect for year was observed for all three sets of attributes using the Kruskal-Wallis test. All sets showed increases in scores from 2014-2016 (Table 4.C). Post hoc testing showed that participants from 2016 ranked significantly higher on their scores for self-oriented attributes, task-oriented attributes and people-oriented attributes than participants in 2014 and 2015. Participants in 2015 ranked significantly higher on people-oriented attributes than participants in 2014 (Appendix 4.C).

**Table 4.C:** The effect of Year (2014, 2015 and 2016) based on the Kruskal-Wallis test for first year veterinary students' responses to the self-oriented, task-oriented and people-oriented attributes.

Sets of attributes	Kruskall-Wallis (2df)	Mean rank scores		
		2014	2015	2016
Self-oriented attributes	11.247*	144.2	153.2	174.6
Task-oriented attributes	30.058**	138.7	145.0	185.7
People-oriented attributes	54.585**	124.5	149.8	193.6
*p<0.01; **p<0.001				

Most other demographic variables were unrelated to responses (Table 4.D). Only the people-oriented attributes showed a significant effect for age using the Mann-Whitney U test. The <20-year-old group showed higher mean rank scores than the ≥20-year-old group.

**Table 4.D:** The effect of age, gender and ethnicity based on Mann-Whitney U tests for first year veterinary students' responses to the self-oriented, task-oriented and people-oriented attributes.

Attribute	Mann-Whitney U	Mean rank scores	
<b>Age</b>		<b>&lt;20-years</b>	<b>≥20-years</b>
Self-oriented	10933 <sup>ns</sup>	158.9	156.2
Task-oriented	11034 <sup>ns</sup>	158.5	157.1
People-oriented	9876*	164.0	146.3
<b>Gender</b>		<b>Women</b>	<b>Men</b>
Self-oriented	8052 <sup>ns</sup>	157.0	164.1
Task-oriented	8072 <sup>ns</sup>	157.1	163.8
People-oriented	7818 <sup>ns</sup>	161.0	149.5
<b>Ethnicity</b>		<b>NZ European</b>	<b>Other</b>
Self-oriented	10325 <sup>ns</sup>	155.8	164.3
Task-oriented	10116 <sup>ns</sup>	154.8	166.3
People-oriented	10307 <sup>ns</sup>	161.3	152.6
<sup>ns</sup> not significant at p<0.05; *p<0.05			

## 4.5. Discussion

### 4.5.1. Overview

This chapter represents the first time that card-sort methodology has been used to explore the opinions of veterinary medical students regarding the attributes of professionalism that they regard as being important. It is also the first time that such opinion has been sought from newly enrolled veterinary students and, even in the medical literature, such studies remain sparse. The significance of the present study is therefore in terms of providing new data on the scantily researched area of students' understanding of those attributes of professionalism that could underpin a worthwhile veterinary career. Of perhaps greater significance is that these opinions were obtained from newly enrolled students who had not yet been 'socialised' into the norms and mores of their chosen profession. As such, the study provides an interesting insight into the thought processes of students who are, on one hand, committed to a particular profession but, on the other hand, are largely naïve about that profession. In other words, the present study provides a prospective view of professionalism, which can be compared with other sections of the thesis in which the participants have

progressively greater understanding of the expectations of their profession and, hence, have views that are progressively more coloured by their professional socialisation.

The key findings were that the attributes of veterinary professionalism that first year veterinary students considered to be important for future career success were, foremost, in the domain of self-oriented factors. However, these students, despite being at the very beginning of their veterinary training, had already recognised the importance of establishing and maintaining effective professional relationships with veterinary clients, demonstrating accountability and integrity, gaining the client's trust and developing effective communication skills. The students acknowledged that effective communication underpins trust, respect and relationship-centred care between the veterinarian and the animal owner.

#### **4.5.2. Important attributes of veterinary professionalism identified by first year veterinary students**

First year veterinary students rated the self-oriented attributes of veterinary professionalism attributes higher than those that were people-oriented or task-oriented. The most highly rated of these self-oriented attributes were self-awareness and self-management, which were identified by the students as essential components of wellbeing. Specifically, these attributes included 'Remaining composed under pressure' and 'Recovering quickly from setbacks' as important components of self-management. In other words, veterinary students appear to start their veterinary degree focusing on personal wellbeing strategies. Since self-awareness and self-management involve the ability to set goals and to manage the pursuit of those goals, and require a degree of adaptability (Farias 2016), these personal wellbeing attributes may have served the students well during the highly competitive and stressful process of gaining admission into the veterinary programme. This notion was supported by Hafen *et al.* (2008) who reported that individuals may be likely to experience depressive symptoms following a significant stressful event. By focusing on emotion-focused coping strategies, such as distress tolerance and emotion regulation, and problem-focused coping strategies, such as purposive problem solving and



positive reappraisal of stressful situations, first year students were, however, able to enjoy higher levels of psychological wellbeing (Hafen *et al.* 2008).

The students underscored the importance of conveying information to clients in an effective manner. There are a number of surveys of practising veterinarians or physicians whose viewpoints align with this finding. For example, Adams and Kurtz (2006) found that effective communication with clients increased both client and veterinarian satisfaction, and improved patient welfare. Likewise, Tinga *et al.* (2001) and McArthur and Fitzgerald (2013) found that clients were most satisfied, and most likely to return to a veterinary practice, when the veterinarian communicated clearly and in a collaborative manner during a consultation. In medicine, patient and physician satisfaction, patient compliance and patient health outcomes were all found to be related to the level of communication skills of the physician (Hall and Dornan 1988; Bertakis *et al.* 1991; DiMatteo *et al.* 1993; Roter *et al.* 1997). The recognition of the importance of effective communication by these aspiring veterinary professionals was also demonstrated by Meehan and Menniti (2014). These authors found that veterinary students considered empathy and non-verbal communication, such as appropriate eye contact and facial expressions, as important components of effective communication with clients.

Students also recognised the importance of veterinarians establishing an effective relationship with clients and gaining their trust and respect. Relationship building between the veterinarian and the client has been recognised as critical for successful professional encounters and in establishing trust (Bristol 2002; Radford *et al.* 2006; McDermott *et al.* 2015). In order to build relationships successfully with clients, Radford *et al.* (2006) recommended that veterinarians acknowledge the client's views and feelings, avoid being judgmental, offer partnership and support and deal sensitively with distressing situations. These authors emphasised the importance of greeting the client appropriately at the beginning of the consultation and eliciting the full spectrum of the client's concerns (Radford *et al.* 2006). It is therefore interesting to note that, even at the very earliest stages of their education, veterinary students had already recognised the importance of these attributes. Similarly, Meehan and Menniti

(2014) found that veterinary students considered relationship-building skills and the ability to gain clients' respect and confidence as important attributes. Furthermore, addressing clients' emotional needs was also regarded by students as an important skill to master (Meehan and Menniti 2014).

Finally, students also highlighted the importance of veterinarians showing integrity and taking responsibility for their actions. These findings aligned with those reported by Hughes *et al.* (2018) who found that clients did not expect veterinarians to be perfect and did not expect them to be expert in all veterinary knowledge or technical skills. Instead clients respected veterinarians who confessed to deficiencies in certain knowledge and skills but promised to rectify this through a process of continual learning and development (Hughes *et al.* 2018).

It is noteworthy that first year students placed little importance on 'Maintaining a constructive sense of humour'. In a study conducted by Mellanby *et al.* (2011), small animal veterinarians listed 'a sense of humour' as a highly desirable attribute in veterinarians. Schull *et al.* (2012) reported that final year veterinary students assigned less importance to the need for a good sense of humour than their prospective employers did. Students may minimise this attribute as they regard the veterinary profession to be prestigious and reputable and would not wish to trivialise it by admitting to the necessity for a healthy sense of humour in the workplace.

### **4.5.3. Demographic considerations**

#### **4.5.3.1. Year**

It was interesting to note that the 2016 first year veterinary class placed more importance on the people-oriented and task-oriented attributes compared to the classes of 2014 and 2015. This could reflect the fact that the 2016 first year intake represented the first class at Massey University in which interpersonal skills and emotional intelligence testing were trialled as a selection method into the Bachelor of Veterinary Science programme in addition to the use of grade point averages. Due to the new selection criteria, the 2016 class may have consisted

of students with different views from previous years on the definition of career success and with a greater awareness of the concept of professionalism and its importance in the veterinary profession. In the Ontario Veterinary College, where selection also involves testing aspects of applicants' emotional intelligence, over half of first and second year veterinary students placed great importance on professionalism skills (Tinga *et al.* 2001).

#### **4.5.3.2. Gender**

No gender difference in student responses was found. This aligns with findings by Shaw *et al.* (2012), who reported more similarities than differences in attitudes to professionalism between male and female veterinary practitioners. In the same study, female veterinarians were, however, found to adopt a more collaborative approach to veterinary consultations than their male counterparts. In addition, female veterinarians were found to spend more of the consultation building rapport with the client, and dedicated more time making encouraging and positive comments to clients, while male veterinarians came across as more anxious and appeared to rush the consultations (Shaw *et al.* 2012). Two further studies have also demonstrated female veterinarians apportioning greater importance to the provision of empathy and emotional support to clients than their male counterparts (Butler *et al.* 2002; Calderón-Amor *et al.* 2017).

Torres *et al.* (2019) found, in a survey of small animal veterinary practitioners, that female veterinarians rated compassion and kindness towards animals higher than male respondents, while male veterinarians rated professional appearance, politeness and proficiency with explaining technical terms higher than their female counterparts (Torres *et al.* 2019). Hess-Holden (2017) considered that both female and male veterinarians would benefit from more formal training and practice to improve their professional interactions with clients. This may reflect the notion that veterinary professionalism skills can be learned and are not intrinsic attributes (Hess-Holden 2017).

##### **4.5.3.3. Ethnic background**

Limited literature exists on differences in perceptions of veterinary professionalism related to the ethnic background of veterinary students. In one study at an Australian veterinary school, equal numbers of both domestic and international students expressed the need for more interpersonal skills training (Mills and Woodall 2005). The percentage of NZ European students in the 2014, 2015 and 2016 first year veterinary classes at Massey University were 66%, 71% and 67% respectively, with the balance representing all other ethnicities in the cohort. While no difference was found in the responses of students from various ethnic backgrounds, it was difficult to draw meaningful interpretations from the data gathered because of low numbers of students in each ethnic category. In future, clearer definitions of the ethnic categories are needed as vague classifications such as 'North American', 'European' and 'Asian' were recorded by some of the students from a non-NZ European ethnic background. This would make it difficult to understand any nuanced differences in opinion between different ethnicities. Future studies would need to address these shortcomings by making the ethnic categories more explicit and nuanced and by surveying a greater number of cohorts of first year veterinary students across multiple veterinary schools.

Future research could also possibly explore the influence of ethnic background when international students are studying away from their home countries. Would a Chinese international student, for example, studying veterinary science in New Zealand, hold the same opinion on professionalism as a Chinese student studying in China? Campbell and Li (2008) found that Asian students studying abroad had to overcome the challenges of language difficulties, lack of knowledge of academic norms and conventions, inadequate learning support and a lack of sense of belonging. These challenges could profoundly affect foreign students' perceptions and levels of satisfaction with their experiences of professionalism teaching at the university (Campbell and Li 2008). Not only should curricula serve to strengthen education around cultural competency in domestic veterinary students (Alvarez *et al.* 2020), they must also include strategies to integrate cultural diversity such that no cultural groups are

disadvantaged as a result of differences in learning styles or understanding (Mills *et al.* 2007).

#### **4.5.3.4. Age**

In this study, the <20-year-old first year students, recently graduated from secondary school, apportioned more importance to the people-oriented attributes than did their older classmates. These findings are contrary to the findings of Heath *et al.* (1996) and Tinga *et al.* (2001) indicating that younger veterinary students focused more on self-development attributes and only apportioned importance to relation-building skills as their experience increased over the course of their training programme. The recognition of the value of people-oriented attributes by first year students could reflect the emphasis placed on professionalism in the New Zealand secondary education national curriculum. Many of the local first year students are school leavers and have recently experienced a national secondary school curriculum that focuses on pupils learning how to relate to others and how to interact effectively with a range of different people in a number of different situations. The National School Curriculum (NSC) promotes student participation in whānau (family), school and community initiatives (NSC 2020).

#### **4.6. Summary**

In this chapter, the first study of a card-sort methodology for obtaining opinions on important attributes of professionalism from a naïve cohort of students has identified a number of key themes. Firstly, participants rated the self-oriented attributes, notably self-awareness and self-management, as important for future career success. Secondly, despite being at the very beginning of their veterinary training, these students underscored the importance of establishing and maintaining effective relationships with veterinary clients as well as demonstrating accountability and integrity and gaining the client's trust. Thirdly, the value of effective communication was also appreciated by the students: they acknowledged that effective communication underpins trust, respect and relationship-centred care between the veterinarian and the client.

There were few significant differences in opinion noted between student respondents from different socio-demographic groups. This indicates that the views on veterinary professionalism are largely shared by first year veterinary students at Massey University across genders and a wide range of ages and ethnic backgrounds.

Taken together, these data show that naïve veterinary students have a basic understanding of veterinary professionalism, which may be derived from life experiences or secondary education or may be something that they have consciously adopted as part of 'clothing themselves' in the attire of their new profession. The findings are remarkably similar to that of final year students (Chapter 5) and clinical practitioners (Chapter 6), in that all recognise the importance of establishing and maintaining effective relationships with the client. Unlike the more 'mature' respondents, however, first year students place great importance on more self-oriented attributes although arguably these attributes could still relate to client welfare as they include qualities such as acting with integrity, maintaining confidentiality, taking responsibility and showing patience. Clearly first year students are as invested in developing effective future veterinarian-client relationships as their senior student and practitioner counterparts.



## **5. The perceptions of final year veterinary students on veterinary professionalism: Attributes important to future success in clinical practice and a critique on the teaching of professionalism**

### **5.1. Overview**

This chapter addresses the second and third research questions and progresses the investigation of students' perceptions of attributes of veterinary professionalism that are important for future career success as a clinical practitioner into the cohort of final year (fifth year) veterinary students. The scope of the investigation in this chapter has been extended into a mixed methods design, in which the basic survey (card-sort) of the previous chapter now also incorporates open-ended questions as well as Likert-scale responses. Secondly, the methodology also includes the use of focus groups. For the focus groups, a phenomenological study, using a constructivist grounded theory (GT) approach, was adopted to gain insights into veterinary students' understanding of veterinary professionalism. This chapter also reports on the use of the surveys and focus groups to gather the opinions of students on their education in veterinary professionalism in the veterinary curriculum at Massey University.

The Introduction reviews the limited literature on the opinions of professionalism held by veterinary students and outlines the value of capturing the perspectives of final year veterinary students to help shape veterinary curricula. The Methods contains an explanation of the survey instrument employed and the statistical analysis used to interpret the quantitative data. A description of the thematic analysis (TA) used to analyse focus group data is also provided.

The Results describe the key attitudes of professionalism and opinions on the educational programme in veterinary professionalism that were identified through the qualitative and quantitative components of the study. The survey findings are



presented followed by consideration of the themes that arose from TA of the focus group transcripts. The chapter then concludes with a Discussion and Summary of the overall findings from both the quantitative and qualitative components of the research study and includes a consideration of how these findings may shape future curricula in veterinary professionalism in primary veterinary qualifications.

### **5.2. Introduction**

The importance of an educational programme in professionalism within primary veterinary qualifications is now well-established (Root Kustritz and Nault 2010; Cake *et al.* 2013; Armitage-Chan 2016; Cake *et al.* 2016). There is, however, limited research that captures the perspectives of veterinary students on such programmes. Research is especially lacking on methods to teach and assess professionalism (Birden and Usherwood 2013). Indeed, the formalisation of the conceptual basis for teaching professionalism has only recently been introduced in veterinary schools. Prior to that, any training that students received in professionalism was a product of the informal and hidden curricula whereby professional values were assumed to be assimilated by students through observation of the conduct of tutors and clinical teaching staff (Birden and Usherwood 2013). This informal culture has the potential, however, to create contentious and conflicting interpretations of professionalism among veterinary students and new graduates. It therefore seems appropriate that the opinions of veterinary students on veterinary professionalism should be understood and incorporated into the development of future formal curricula in veterinary professionalism (Hafferty 2006).

In one study, medical students felt that their attitudes towards professionalism had developed throughout their undergraduate medical degree without the need for formal instruction in professional principles (Birden and Usherwood 2013). These medical students felt that professionalism should be taught within a clinical context later in their medical training, and not as a standalone didactic module removed from their clinical experience. They described the didactic teaching sessions on professionalism as superficial and labelled the course contents as repetitive, trivial and patronising (Birden and Usherwood 2013). With this

prevailing sentiment, there is a risk that veterinary students may also go through the motions of acting professionally without fundamentally believing in the virtues underpinning professionalism.

The risk of this happening could be minimised by adopting an approach to professionalism education along the lines of the four layered pyramidal approach to the assessment of medical competence proposed by Miller (1990). Knowledge of professionalism on its own is insufficient for the practice of veterinary medicine. Learners need to know how to use their knowledge and demonstrate, through performance, that they are capable of using their knowledge until finally they are capable of functioning independently within clinical situations (Cruess *et al.* 2016).

The first year veterinary students in Chapter 4 were newly enrolled into the degree, so their opinions about veterinary professionalism were not informed by a formal programme of instruction. By contrast, the final year veterinary students, who were the focus of this chapter, had developed an insight into values of professionalism through their exposure to four and a half years of the formal veterinary professionalism educational programme. Furthermore, they had gained clinical experience during rotations in the Veterinary Teaching Hospital and in their external private practice clinical placements, and the principles of veterinary professionalism had been accentuated through their interactions with clinical staff demonstrating positive (and negative) professional role-modelling. It was postulated that the perspectives of these students would have developed over the duration of the programme, such that the attributes of professionalism that they considered important would differ from their junior compatriots.

In the face of those maturing perspectives of professionalism, it was also considered opportune to elicit student opinion on the extent to which the syllabus in professionalism at Massey University had contributed to their professional development. Commentary from final year veterinary students would strengthen the justification for the inclusion of specific instruction in veterinary professionalism in the undergraduate curriculum. Moreover, by accounting for the students' opinion when shaping the curriculum, students would feel ownership in

the decision-making and would be more likely to engage with the subsequent programme (Darling-Hammond *et al.* 2020).

This study was, therefore, undertaken to evaluate the perceptions of final year veterinary students on attributes of professionalism that they considered important for future career success in veterinary clinical practice. Their opinions on the strengths and weaknesses of the current formal undergraduate educational programme in veterinary professionalism were also investigated. The data generated from this current study will be used to inform the future curriculum in veterinary professionalism at Massey University and might help to inform the process of developing continuing professionalism education programmes for veterinary graduates.

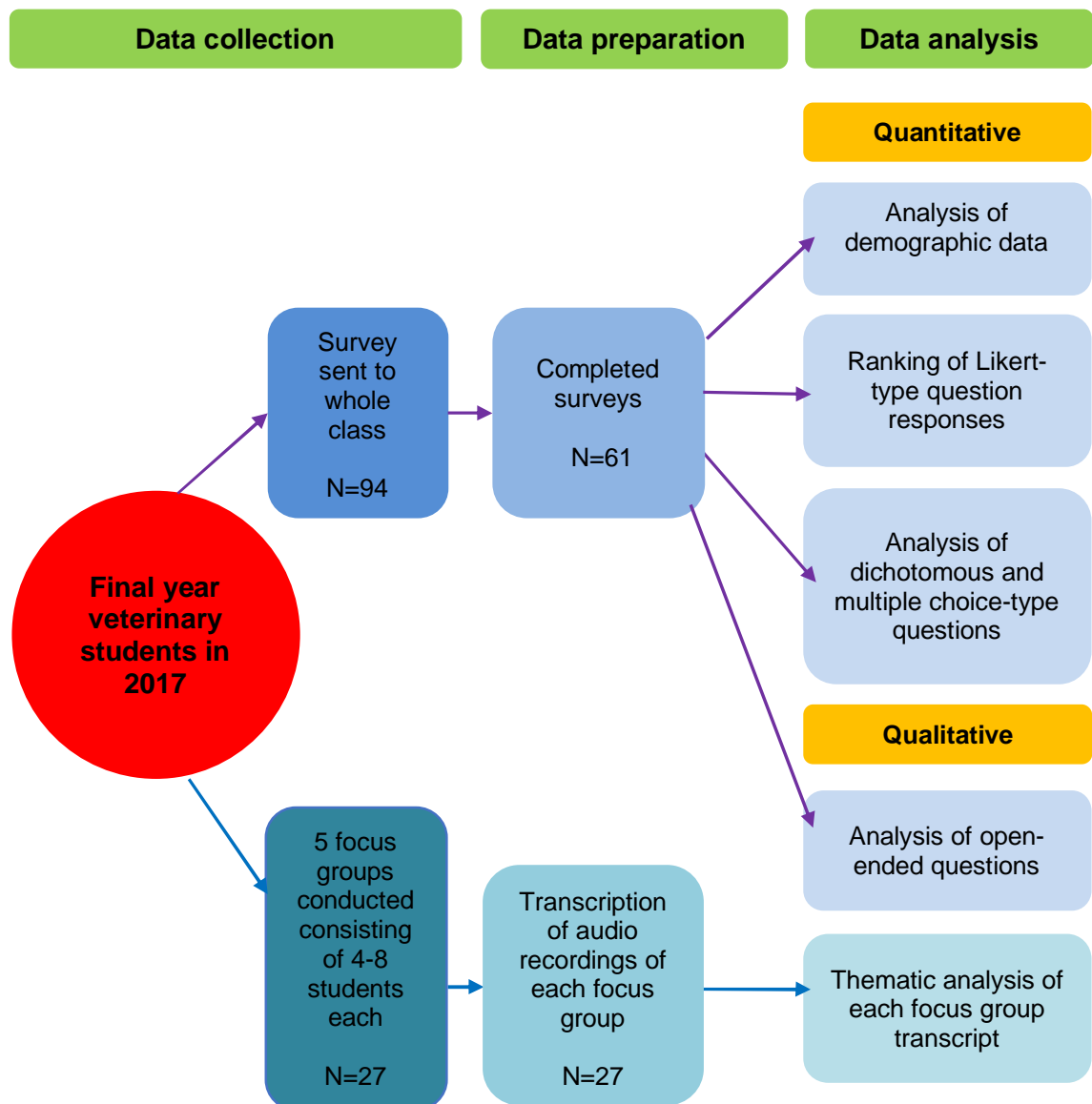
### **5.3. Methods**

#### **5.3.1. Research design**

The study used a sequential mixed method design, in which quantitative and qualitative data were collected to mutually support each other. Student opinion represents a very complex phenomenon and the mixed methods approach allowed a more complete picture to be elucidated and deeper insight to be gained than could be achieved by either qualitative or quantitative methods alone.

The research involved two stages. Stage one involved collecting and analysing quantitative data (through Likert-scale responses) and qualitative data (through open-ended questions) via a survey sent out to all final year students in 2017. Stage two involved conducting focus groups with a proportion of the final year students to provide a more comprehensive picture of the final year perspectives. The focus group data formed the root of the thematic research.

Figure 5.A shows a flow diagram depicting the stages of data generation and analysis in this final year veterinary student study.



**Figure 5.A:** Flow chart depicting the stages of data generation and analysis in the final year veterinary student study on veterinary professionalism.

### 5.3.2. Survey design

Survey questions were formulated based on discussion with veterinary educators and on evaluation of the literature on veterinary professionalism and employability. The first three questions collected data on students' gender (female/male), age (20-25-years-old/ $\geq$ 26-years-old) and ethnic background (New Zealand [NZ] European/Other) allowing exploration of student responses by these demographic variables. As in Chapter 4, students from ethnic backgrounds other than NZ European included Māori, Pacific, Chinese, Taiwanese, Korean,

Singaporean, Japanese, Vietnamese, Filipino, Indian, Middle Eastern, Latin American, African and Europeans from other countries. There were, however, too few individuals within each of these groups to analyse them separately.

The questionnaire (Appendix 5.A) contained 11 further questions that sought opinions on: (i) important attributes of professionalism for career success and (ii) the value of the educational programme in professionalism. Students were asked to rate professionalism attributes in the domains of self-development (18 items), task-oriented (14 items) and building relationships (15 items), using a 4-point Likert-scale (1: irrelevant to career success; 2: Less relevant to career success; 3: Desirable for career success; 4: Essential to career success). The four-option design was to prevent the students from providing the neutral response that can occur with five-point scales (Fink 2017). Responses were collated to develop a ranked list of attributes based on the means of the responses.

Subsequent open-ended questions allowed respondents to propose additional attributes missing from the survey list; and to choose the three attributes of veterinary professionalism that they considered to be most, and least, important for career success. The final section of the survey consisted of questions that were designed to solicit student opinion on the relevance and appropriateness of the current programme in veterinary professionalism and on how well the professionalism theme was integrated into the whole curriculum.

A draft survey was pilot tested by four independent respondents (two fourth year veterinary students and two veterinary academic staff members) to check for suitability and validity. Based on their comments and suggestions, a final version of the survey was approved (Appendix 5.A). The survey was conducted online over a period of six weeks to all 94 final year veterinary students enrolled at the School of Veterinary Science at Massey University at the end of their 2017 academic year using a secure commercial online survey service (Survey Monkey 1999-2008, Portland, OR, USA). A link to the online survey was distributed via email to the class.

### 5.3.3. Focus group design

Selection of the focus groups was based on an invitation sent out to all final year veterinary students at Massey University in 2017. Participation was voluntary. Five focus groups were established (n=8, 6, 5, 4, 4, respectively). Twenty of the participants were women and seven were men which was proportional to the gender balance of the class.

Focus groups were chosen over individual interviews to decrease the pressure and stress on individual interviewees and to enable the accumulation of data from multiple final year students with different perspectives on veterinary professionalism. All focus groups were moderated by the researcher and occurred in a private meeting room on campus but away from the veterinary faculty.

The moderator guided the process using a semi-structured script prepared with appropriate open-ended questions (Appendix 5.B). The first part of each focus group involved encouraging student discussion on professionalism. This included asking the students for their definitions of professionalism and of veterinary career success. The first part also solicited opinion on those attributes of professionalism that they deemed important for future career success. The second part of the focus group elicited opinion on the current veterinary professionalism programme across all five years of the primary veterinary degree at Massey University. All focus group participants were encouraged to speak freely about their opinions and experiences and to discuss topics not specifically covered in the semi-structured script.

Focus groups were recorded using an Olympus (WS-853) digital voice recorder. Each focus group lasted approximately one hour. These audio recordings were downloaded as individual MP3 files and transcribed *verbatim* using a professional transcribing company (Fullstop Digital, Wellington, New Zealand). Student participants were anonymised to maintain confidentiality.

#### **5.3.4. Ethical approval and informed consent**

The study was undertaken with ethics approval from the Massey University Human Ethics Committee (MUHEC HEC: Southern B Approval 17/31). Potential participants were provided with an information sheet that explained the purpose of the research and the rights of students who chose to participate (Appendix 5.C).

For focus groups, confidentiality and consent issues were addressed by requiring all participants to sign a consent form with the assurance of confidentiality outlined in the accompanying information sheet. Further, to ensure confidence and encourage open discussion, all focus group participants were assured that the details of the discussion would be anonymised, and strict confidence maintained. Data access was restricted to the researcher and the transcription company who signed a confidentiality agreement.

Participants were informed that the results of the survey would be used to facilitate the further development of the current undergraduate veterinary professionalism training programme.

#### **5.3.5. Analysis of quantitative data**

The survey data were analysed using descriptive and inferential statistics. Gender distribution, age groups and ethnic background were summarised and expressed as proportions. Responses to multiple choice-type questions and dichotomous questions were expressed as proportions. Results for the Likert-scale questions rating the importance of 47 veterinary professionalism attributes were presented as arithmetic means. Ranking of the professionalism attributes, as perceived by final year veterinary students, was undertaken on the basis of arithmetic means, since it was not possible to capture any detail by the use of medians as measures of central tendency.

The internal consistency or reliability of the Likert-scale data was demonstrated using the Cronbach's alpha ( $\alpha$ ) statistic (Fink, 2017). This statistical measure was used to describe how well the data within each set of professionalism attributes

(self-development, task-oriented and relationship building) complemented each other.

Mann Whitney U tests were used to compare the median scores for final year veterinary students' responses to the self-development, task-oriented and relationship building attributes between gender (female/male), ages (20-25/≥26-years-old) and ethnic backgrounds (NZ European/Other). The null hypothesis was that there was no difference between the median response scores for each set of attributes and any of these groups. The level of significance was set at  $p \leq 0.05$ . These statistics were calculated using IBM SPSS Statistics, version 25.

### **5.3.6. Analysis of qualitative data**

#### ***5.3.6.1. Theoretical underpinnings of the qualitative research methodology***

This was a phenomenological study, undertaken using a constructivist GT approach. The phenomenological approach has been used in qualitative research to discover the tacit knowledge, techniques and attitudes that underlie performance but that cannot be easily explained or identified by research participants (Silva *et al.* 2016).

Following GT principles, sampling was conducted using a theoretical, purposive and iterative process with the findings that emerged from one focus group influencing the nature of the open-ended questions asked in subsequent focus groups. Through constant comparison of the findings, the nature of the questions changed as the data collection progressed and various themes emerged, although the core questions remained unchanged and continued to be asked in all focus groups.

#### ***5.3.6.2. Thematic analysis of the focus group transcripts***

Thematic analysis was conducted on each focus group transcript, paying close attention to those parts that covered: (i) important attributes of professionalism for future career success; and (ii) the current veterinary professionalism training programme at Massey University. NVivo software (QSR International,



Melbourne, Australia, Version 12) was used to help analyse the transcripts and code the data. Thematic analysis was conducted using the six-step process as described by Braun and Clarke (2006; 2014) and Maguire and Delahunt (2017) and was performed independently by the researcher and two of the co-researchers.

### **1. Familiarisation with the data**

Initially, familiarity with the data was achieved by reading each focus group transcription repeatedly. The accuracy of each transcription was checked by listening to the original audio recordings while simultaneously reading the transcripts. Notes were made on the prints of the transcripts to keep track of any thoughts that arose during this process. In line with the GT process, any subtleties or nuances emphasised during the interview but not indicated in the transcripts were highlighted.

### **2. Generation of initial codes**

A thematic coding system was developed by reading the transcribed texts and deriving coding categories. These codes were generated through an emergent and iterative process. This TA was performed inductively, in that the themes were allowed to arise from the raw data (Joffe 2011). Each transcript was read, and sections of the text were highlighted using preliminary codes based on areas that were emphasised by a participant, were recurrent, were linked with veterinary professionalism competency frameworks, or had been mentioned by previous authors in the literature on veterinary professionalism. Segments of the text were labelled with descriptive codes. These codes were created in NVivo as nodes and the relevant portions of the transcripts (in the form of direct quotes) were coded to them (See Appendix 5.D and Appendix 5.E - screen shots of the NVivo nodes). Dual coding was performed if a response served to illustrate more than one category.

In order to add rigour to this part of the process, memos were generated using the NVivo software. These memos allowed the researcher's reflections and

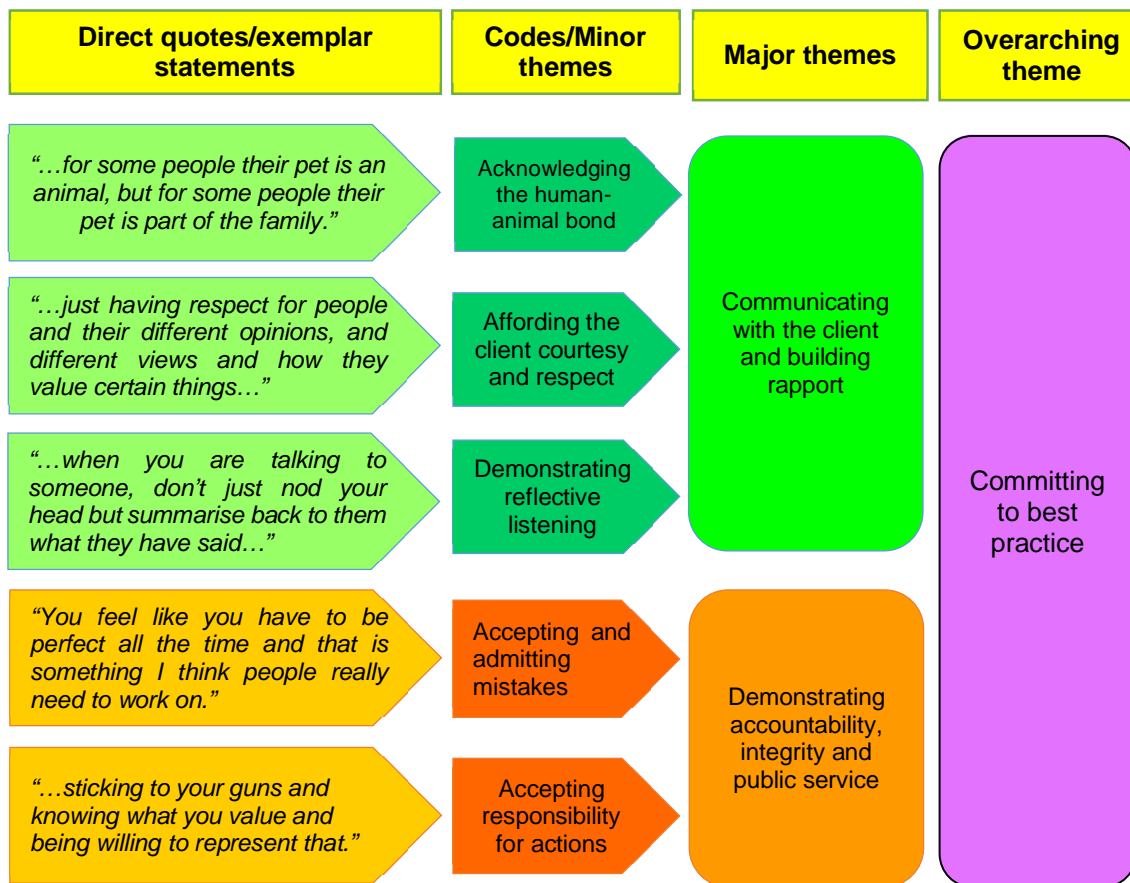
interpretations to be considered as comparisons were being made between codes. They also allowed any changes made to the codes, and the reasons for doing so, to be recorded. Kennedy and Lingard (2006) described the process of memo writing as an important part of the generation of a GT. These memos constituted informal notes and played an important role in recording changes made and shaping the transformation of codes into subthemes and minor themes.

### **3. Search for themes**

Once this process of coding had been completed, quotes (exemplar statements) across interviews within each of the final codes were reviewed to identify recurrent patterns from which subthemes/minor themes could emerge. In this way, the attributes of veterinary professionalism that were associated with career success, as well as the student opinion on the educational programme in veterinary professionalism, could gradually emerge from the data.

### **4. Review of themes**

Transcripts were re-assessed and re-coded as new minor themes emerged until a point of saturation was achieved and no new minor themes were identified. The minor themes were reviewed to ensure that they adequately captured the codes and to ensure that there was no overlap between minor themes. Figure 5.B provides some insight into the decision-making process and demonstrates how the major theme of 'Committing to best practice' started to develop.



**Figure 5.B:** An example of the coding process (template for figure adapted from O'Brien and Linehan 2018).

During this phase it is was often necessary to combine two provisional minor themes when it became evident that they were not discrete themes *per se* but components of a single theme (Braun and Clarke 2006). In the analysis on important veterinary professionalism attributes, for example, 'Working effectively in teams' was initially specified as a discrete minor theme, but it was subsequently decided that it formed part of the broader theme of 'Demonstrating collegiality and effective teamwork'. This was because the text segments under 'Working effectively in teams' indicated a broad collegial approach rather than a specific attribute.

### 5. Definition and naming of themes

This stage involved the development of the minor themes so that the relationships between them and the ways that they related to the research questions were

illuminated (Crowe *et al.* 2015). The minor themes were reviewed in relation to the full data set before the final minor and major themes were named and defined. Through this process of constant comparison, emerging theoretical constructs were continually refined.

At the end of this stage, one overarching theme with three major themes for the veterinary professionalism attributes had been defined and named. Within these major themes a total of 22 minor themes were identified. For the veterinary professionalism training programme, three major themes under one overarching theme were defined and named.

Five focus groups were sufficient to achieve saturation of student perspectives, inasmuch as emergence of new codes markedly diminished as analysis progressed. Analysis was considered to be complete once data saturation had been achieved and once agreement was reached between all three researchers on the interpretation of the data and its description. By ensuring that enough focus groups were undertaken to achieve saturation, with no new codes emerging, it was considered safe to assume that through this constant comparison process, the themes or theories that emerged were grounded in the data (Kennedy and Lingard 2006).

### **6. Production of the report**

Once saturation had been achieved and consensus had been reached with the two co-researchers over the identities of the minor themes and major themes above, synthesis of the findings was undertaken (Braun and Clarke, 2006). Thereafter, a narrative was created to illustrate the relationships between the minor themes and major themes and the research questions (Braun and Clarke 2006; Nowell *et al.* 2017). Direct quotes were used to illustrate and/or validate this narrative. When reporting direct quotes, participants were identified numerically and by focus group number (e.g. S4, FG3) in order to preserve their anonymity.

## 5.4. Results

### 5.4.1. Survey results

#### 5.4.1.1. Summary statistics

Sixty-one students, out of a class of 94 (65%), completed the online survey. Two students did not respond to any of the Likert-scale options and so the responses of a total of 59 students were considered. The Cronbach's alpha ( $\alpha$ ) scores for the self-development, task-oriented and relationship building attributes were 0.833, 0.858 and 0.890 respectively, indicating high levels of consistency for data from each set.

Table 5.A shows the demographic breakdown of the 59 student respondents by age, gender and ethnic background. Appendix 5.F shows the measures of central tendencies and percentages of student responses for the self-development, task-oriented and relationship building veterinary professionalism attributes for 2017.

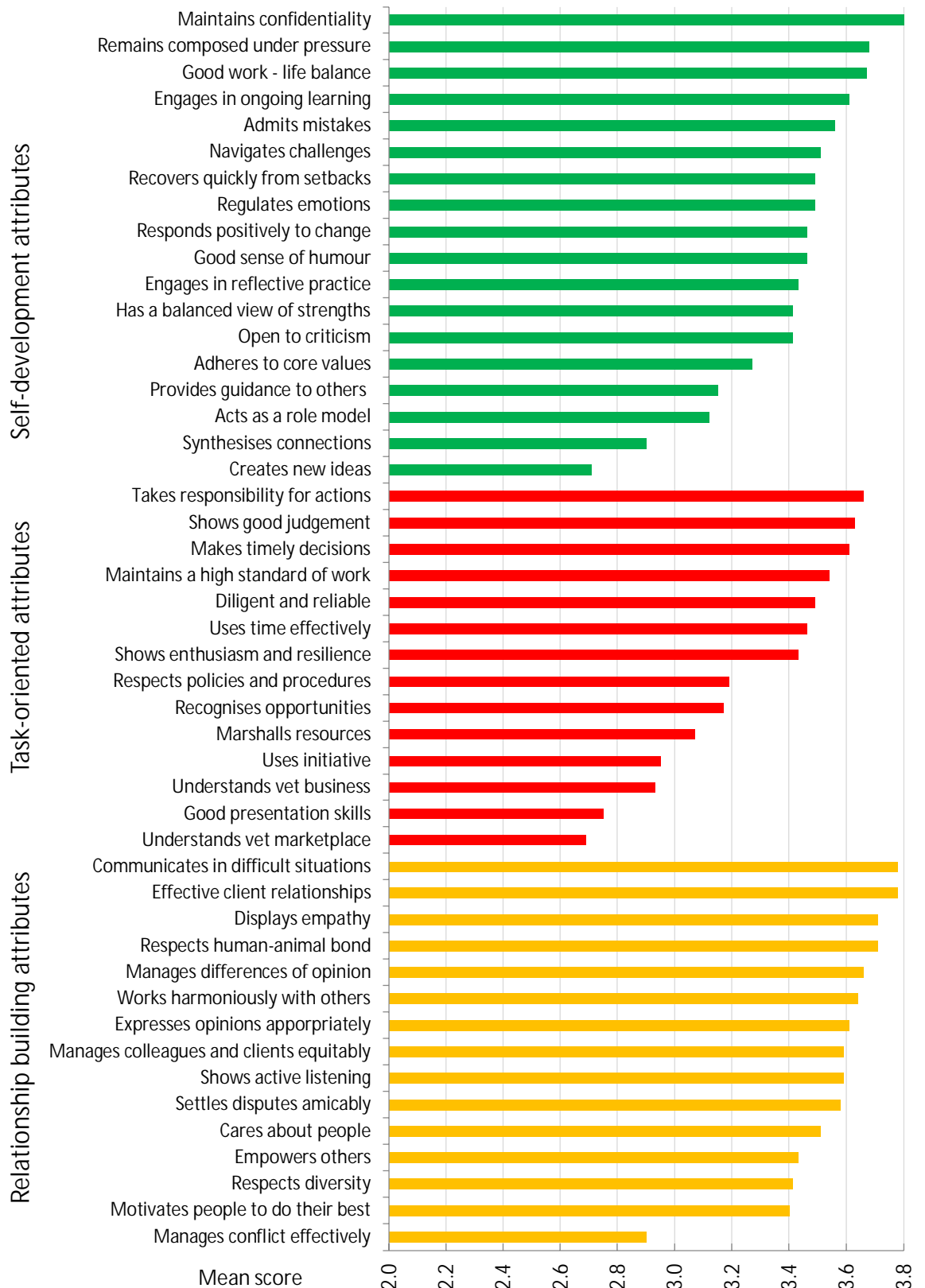
**Table 5.A:** 2017 final year student respondents (N=59) by age, gender and ethnic background.

Demographic data		Numbers	%
Age	20-25-years-old	39	66
	≥26-years-old	20	34
Gender	Male	11	19
	Female	48	81
Ethnicity	NZ European	40	68
	Other	19	32

#### 5.4.1.2. Ranking of attributes

Figure 5.C shows the mean scores of the self-development, task-oriented and relationship building attributes, ranked from highest to lowest mean score within each set.

## 5. Final year veterinary students



**Figure 5.C:** The mean scores of the final year veterinary students' responses for the self-development, task-oriented and relationship building veterinary professionalism attributes.

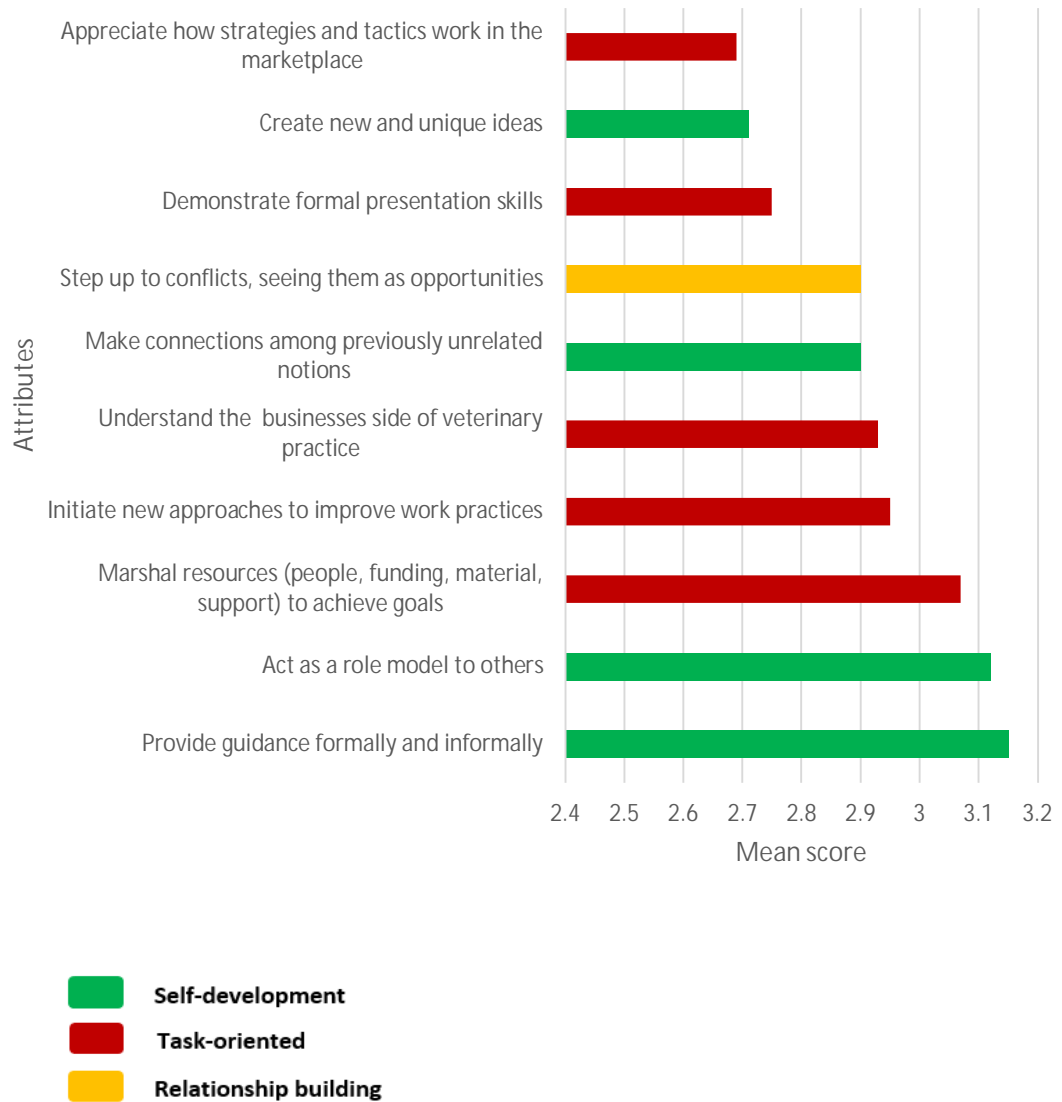
Figure 5.D shows the ten most important attributes of professionalism selected by final year veterinary students, based on the overall mean score for each attribute. The top ten attributes were predominantly relationship building attributes and included establishing and maintaining effective relationships with clients. Related to this attribute, communicating with difficult or grieving clients in an empathetic manner, displaying empathy towards the plight of others experiencing difficulties or discomfort and showing an understanding and respect for the human-animal bond were included in the top ten most important attributes.



**Figure 5.D:** The 10 attributes of professionalism that had the highest mean scores from final year students.

Figure 5.E shows the ten least important professionalism attributes selected by final year veterinary students based on the mean scores for each Likert-scale question. The bottom three attributes included ‘Demonstrating formal

presentation skills’, ‘Creating new and unique ideas’ and ‘Appreciating how strategies and tactics work in the marketplace’.



**Figure 5.E:** The 10 attributes of professionalism that had the lowest mean scores from final year students.



### **5.4.1.3. Analysis of open questions**

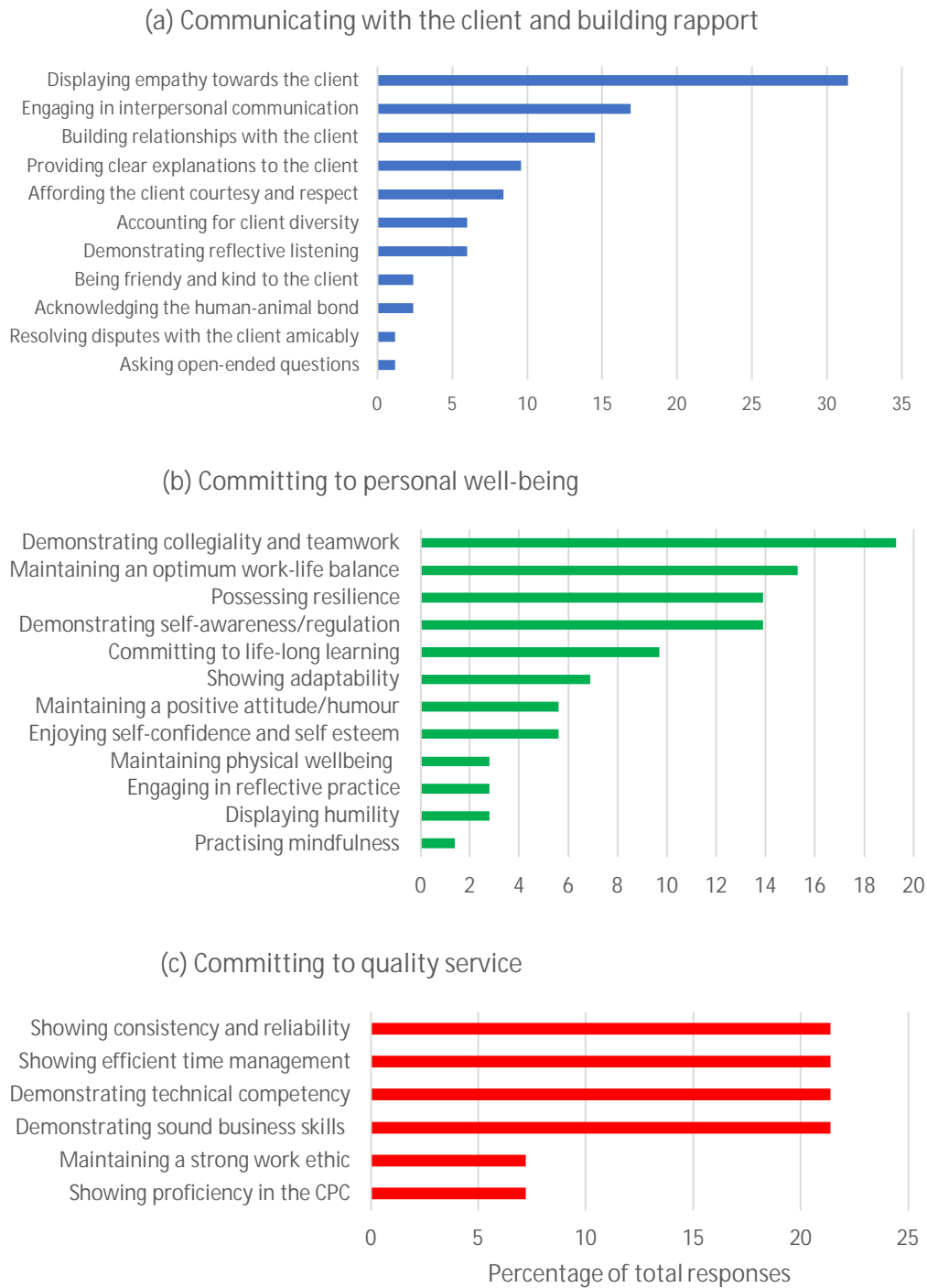
Two of the open questions on the survey (Question 8: 'Are there any other veterinary professional competence attributes which you feel are essential to veterinary career success'; Question 9: 'Please select three professional attributes which you think are most essential for veterinary career success') produced very similar responses, so the data were analysed together. Four broad themes/attributes were identified as illustrated in Figure 5.F.



**Figure 5.F:** The four themes/attributes identified from the responses to Question 8 ('Are there any other veterinary professional competence attributes which you feel are essential to veterinary career success?') and Question 9 ('Please select three professional attributes which you think are most essential for veterinary career success').

These responses aligned with the themes identified in the qualitative data set presented further on in Section 5.4.2.1. in the Results (Figure 5.J). Briefly, under the heading 'Demonstrating accountability and integrity', the most common responses were 'Demonstrating honesty and integrity' (56% of replies) and 'Accepting and admitting mistakes' (44%). Under the heading 'Communicating with the client' (Figure 5.G(a)), the most common responses were 'Displaying empathy and compassion' (31%), 'Engaging in good interpersonal communication' (17%) and 'Building relationships with the client' (14.5%). Under the heading 'Committing to personal wellbeing' (Figure 5.G(b)) the most common responses were 'Demonstrating collegiality and effective teamwork' (19%) and 'Maintaining an optimum work-life balance' (15%). Finally, under the heading 'Committing to quality service' (Figure 5.G(c)), the most common responses were 'Showing consistency and reliability', 'Showing efficient time management', 'Demonstrating technical competence' and 'Demonstrating sound veterinary business skills' (21% each).

Question 10 asked students to select three professionalism attributes that they thought were least essential for veterinary career success. Responses are shown in Figure 5.H. The attributes identified as the least important for career success included veterinary business skills (30% of responses), marketing strategies (11%), public speaking skills (9%) and creativity and motivation (9%). Paradoxically, veterinary business skills were identified by students as one of the most important professionalism attributes (Figure 5.G(c)) and as the least important professionalism attribute (Figure 5.H) for career success.



**Figure 5.G:** The most important attributes of veterinary professionalism for career success, as determined by the percentage of the total responses to Questions 8 and 9 (see text for details), under the headings (a) ‘Communicating with the client and building rapport;’ (b) ‘Committing to personal wellbeing;’ (c) ‘Committing to quality service’.

### Least important veterinary professionalism attributes



**Figure 5.H:** The least important attributes of veterinary professionalism for career success, as determined by the percentage of the total responses to Question 10.

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#### **5.4.1.4. Comparison of demographic variables**

Most demographic variables were unrelated to responses. Only the self-development attributes showed a significant effect for age using the Mann-Whitney U test (Table 5.B). The 20-25-years-old group showed higher mean rank scores than the  $\geq 26$ -year-old group.

**Table 5.B:** The effect of age, gender and ethnicity based on Mann-Whitney U tests for final year veterinary student responses to the self-development, task-oriented and relationship building attributes.

Attribute	Mann-Whitney U	Mean rank scores	
		20-25-years	≥26-years
<b>Age</b>			
Self-development	247.0 *	33.7	22.9
Task-oriented	345.5 <sup>ns</sup>	31.1	27.8
Building relationships	286.0 <sup>ns</sup>	32.7	24.8
<b>Gender</b>			
		<b>Females</b>	<b>Males</b>
Self-development	228.0 <sup>ns</sup>	30.8	26.7
Task-oriented	259.0 <sup>ns</sup>	29.9	30.5
Building relationships	224.5 <sup>ns</sup>	30.8	26.4
<b>Ethnicity</b>			
		<b>NZ European</b>	<b>Other</b>
Self-development	317.0 <sup>ns</sup>	31.6	26.7
Task-oriented	332.0 <sup>ns</sup>	28.8	32.5
Building relationships	352.0 <sup>ns</sup>	30.7	28.5
<sup>ns</sup> not significant at p<0.05; *p<0.05			

#### **5.4.1.5. Opinions on the educational programme in veterinary professionalism**

##### **5.4.1.5.1. Importance of including veterinary professionalism in the veterinary curriculum**

When asked how important they felt it was to include veterinary professionalism training as part of the veterinary undergraduate curriculum, 72% of students (44/61) said 'essential', 23% said 'important' (14/61) and only 3% (2/61) said 'not very important'.

##### **5.4.1.5.2. Change in final years' perceptions of essential veterinary professionalism attributes**

When asked whether their perceptions of essential veterinary professional attributes had changed over the course of their undergraduate training, 62% of students (36/58) said yes. Students who answered yes to this question were then asked how their perceptions had changed and indicated that their understanding of the importance of learning about veterinary professionalism had only emerged

late in the programme, e.g. *“In the early phases of the degree I didn't realise how important interpersonal communication skills were, thinking the work would be more with animals than with people. Now I understand it's the other way around”* (Student [S] 28).

The recognition of the importance of learning veterinary business skills during the undergraduate veterinary programme was also acknowledged, e.g. *“It's definitely important to understand how a vet business works, otherwise you'll end up going under because you're too focused on providing a service and less about making money and keeping the clinic afloat...”* (S 11).

The necessity to maintain mental and physical wellbeing throughout the course of the veterinary programme was recognised by one student, e.g. *“... I have seen the ones getting worn out are also those who are not really giving themselves a break with constructive personal down time...”* (S 20).

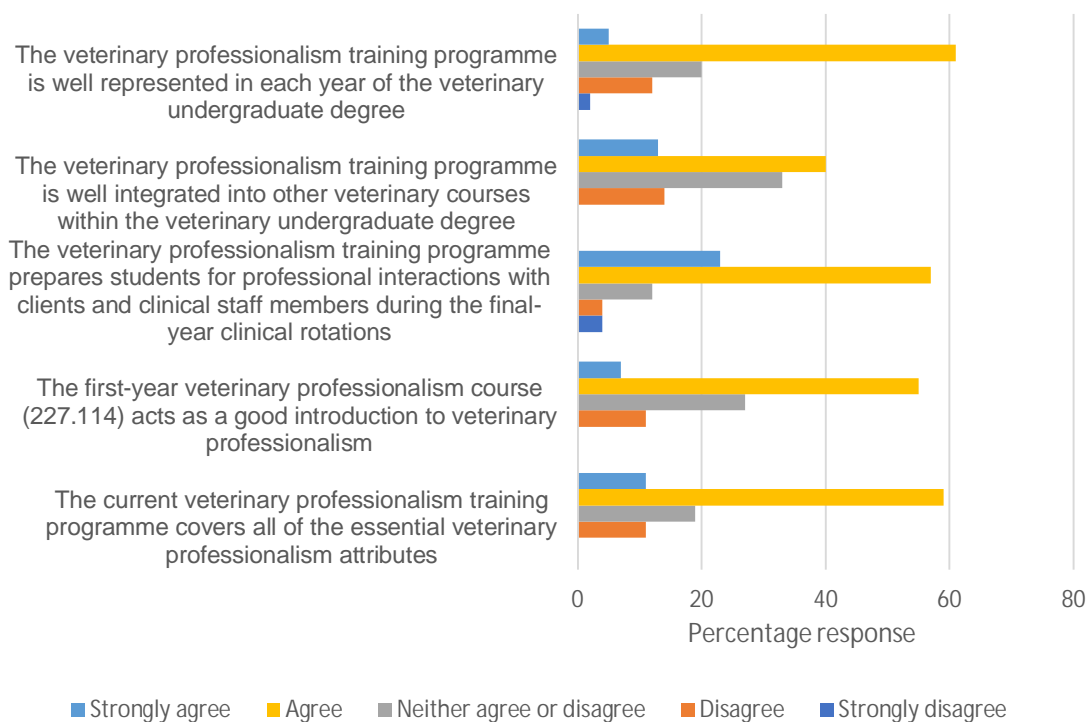
The need to continue professionalism development beyond the undergraduate training programme was also acknowledged, e.g.

*It has become more important to me the notion of continuing one's own professional development and always trying to keep up with new advances in understanding/technology. So many vets I have met have been stuck in the dark ages with either the way they do things or the way they interact with clients... (S 23).*

#### **5.4.1.5.3. Opinions on the suitability of the educational programme in professionalism**

Over 62% of students (35/56) agreed (i.e. responded 'strongly agree' or 'agree') that the first year veterinary professionalism introductory course acted as a good introduction to the subject. Moreover, 70% of students (39/56) felt that the current professionalism programme covered all the essential attributes; with 66% of students (37/56) considering that the subject was well distributed through each year of the degree. Over 80% of students (45/56) agreed that the education in

professionalism adequately prepared them for professional interactions with clients and clinical staff members during the final year clinical rotations and external clinical placements (Figure 5.1). Less agreement was noted (52%) when students (29/56) were asked whether the professionalism programme was well integrated into other courses within the degree.



**Figure 5.1:** Student opinion on the suitability of the veterinary professionalism educational programme at Massey University.

In the free-text portion of Question 12 some students noted that they struggled to appreciate the relevance of the first year introductory course on professionalism, but that the usefulness of professionalism training only became more apparent in later years, e.g.

*I think in first year it was a little lost on us, we had long sessions with people about communicating and clinical work was so far away it was hard to find it directly useful. However, as the years progressed it became more useful... (S 5).*

There was some disagreement about how well the programme in professionalism had been embedded into the overall curriculum. One student, for example felt that it had been done poorly, e.g. *“It would be good to get more integration into other veterinary courses - professional skills always seemed to be its own stand-alone topic”* (S 20),

whilst another came to the opposite conclusion, e.g. *“I think it is pretty difficult to have professional studies spread throughout the degree ... however I think it has been presented pretty well for us in our degree”* (S 14).

Moreover, poor behaviour of clinical staff could significantly undermine the effects of the professionalism programme, e.g. *“staff during final year rotations...do not necessarily have good communication or professional skills. Students are not always treated well at all in final year ...”* (S 17).

In a similar vein, one student requested that the principles of wellbeing, emphasised throughout the veterinary professionalism training programme, should not be undermined by clinicians in the final year clinical rotations who demanded students work unacceptably long hours, e.g.

*...we learn a lot about maintaining our own wellbeing, work life balance, adequate mental health etc, but then when we get into the later years of the degrees it goes out the window because we're expected to spend long hours at Massey (well past the point of efficient learning) and so have to compromise our wellbeing* (S 13).

#### **5.4.1.5.4. Appropriate veterinary professionalism teaching formats**

The most preferred formats for instruction in veterinary professionalism were workshops (44/57, 77%), group tutorials (43/57, 75%) and scenario role plays (36/57, 63%). The actual format that a workshop would take was not defined. Lectures (20/57, 35%) and filmed simulated consultations (21/57, 37%) were cited as the least popular teaching formats.



Thus, clinical rotations and external placements with private practices could be the most realistic places for learning about professionalism, as students could gain an idea of what their future workplaces would resemble. Comments were commonly made on how real interactions with actual clients represented the most authentic learning experience, e.g. “...most of our learning will have to be out in the workplace and that’s the way it should be, I think” (S 1), “Interacting with real clients in the hospital is the best practice we could have...” (S 7).

### **Simulated consultations**

An interesting thread of commentary emerged about the methods used for teaching communication skills for client consultations. Actors are used to represent ‘real’ clients in case-scenarios of variable, but advancing, complexity. The technique requires students to follow a prescribed communication framework based on the Calgary-Cambridge model (Radford *et al.* 2006). The interaction with the simulated client is recorded and, in a subsequent debrief, the students’ communication skills/strategies are critiqued.

There was divided opinion about this as a learning format. Some criticised filmed simulated consultations using actors as clients as stressful and unrealistic, e.g. “Cameras and acting in front of our classmates are stressful for most of us, and while they do provide an opportunity to practice, some of the benefit is outweighed by how uncomfortable many of us feel” (S 7), “Doing those staged scenarios were absolutely horrible and so unnatural...I think that was definitely a waste of our time as well just plain cruel.... It was horrible (S 8).

Others, however, acknowledged the benefit of the simulated consultation training, e.g. “Although I hated it at the time, the practise consults we did during second year and fifth [year] were really beneficial as it made you practice or at least think about what you would actually say to a client” (S 10).

Apart from the stress inherent in such recorded interviews, it is possible that the communication framework may have impaired students’ ability to engage with the simulation, e.g.

*I find that with the filmed consultations, while they are a great tool and very valuable learning environment - I sometimes feel like the criteria of what was required was almost too rigid? I found myself having to unnaturally do/say things which didn't necessarily flow/fit with what I would do in real life just for the video, because I knew that's what the facilitators would be wanting to see/hear! (S 14).*

Likewise, it may be that the simulations would benefit from being embedded into 'mainstream' clinical courses, e.g. *"I really enjoy when we have simulated consultations where we need to try and diagnose a problem, integrated into other papers. I just didn't feel like it was as integrated as it could have been..." (S 20).*

#### **5.4.2. Results from focus groups**

##### **5.4.2.1. Attributes of professionalism that are important for career success**

Each focus group opened with a discussion on the definition of career success. After this the discussion moved on to definitions of veterinary professionalism and thence to the attributes of veterinary professionalism that were considered important for future career success.

Work longevity, establishing an optimum work-life balance, and making a positive contribution to the profession were identified as key components of career success, e.g. *"Career success would be: can you see yourself still doing this in 10-15-20-years' time, and not only just doing it but enjoying and wanting to go to work every day?" (S1, Focus group [FG] 3), "Looking forward to going to work every day, doing a job that I'm happy doing that also allows you a life outside of work that you enjoy" (S1, FG4), "To be happy with my work and feel like I am doing something positive" (S4, FG5).*

Opinions differed widely on a suitable definition of professionalism. Some definitions were broad and inferred that the term professionalism covered both psychomotor (technical) skills as well as interpersonal and self-awareness skills, e.g. *"...I think that it [professionalism] includes both directly your clinical skills, but*

*also, I guess your people skills and how to manage people, how to manage yourself and your time..."* (S1, FG5).

Conversely, others argued that professionalism falls only within the affective domain (i.e. a behaviour/ expression of feelings) and not within the cognitive or psychomotor domains, e.g. *"...professionalism is more a manner in which you conduct yourself"* (S2, FG4).

There was robust discussion on the difference between 'professionalism' and 'professional skills'. There was consensus that the term professionalism referred to attitude (i.e. the veterinarian's predisposition to certain values, ideas and systems) and behaviour, while professional skills referred to the more tangible competencies in areas such as communication, management, business, research, teamwork and leadership, e.g. *"Professionalism may be how you behave, whereas skills are what you can acquire to help you be professional"* (S2, FG3).

There was, however, agreement that professional skills provided the scaffolding on which to build professionalism, e.g. *"...I think that your professional skills are a way that you convey your professionalism"* (S2, FG3).

The overarching theme that emerged from TA of the focus group transcripts was that of 'Committing to best practice'. Under this, three major themes were identified: 'Communicating with the client and building rapport', 'Demonstrating accountability and integrity' and 'Committing to personal wellbeing' (Figure 5.J). Multiple minor themes were nested under these three major themes (Figures 5.K-5M).



**Figure 5.J:** The three major themes under the overarching theme of ‘Committing to best practice’.

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**5.4.2.1.1. *Communicating with the client and building rapport***

Eight minor themes were identified that related to this theme (Figure 5.K).



**Figure 5.K:** The eight minor themes under the major theme of 'Communicating with the client and building rapport'.

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### **Accounting for client diversity**

Animal owners come from a range of cultural backgrounds, which needs to be taken into account when communicating and building a relationship with the client, e.g. "...*just having respect for people and their different opinions, and different views and how they value certain things, because obviously different people value different things differently*" (S7, FG3).

### **Acknowledging the human-animal bond**

The veterinarian needs to acknowledge that the strength of the bond between owners and their pets differs from owner to owner, as this will determine how the veterinarian should communicate with the client, e.g. "...*you have to be able to*

*assess their relationship with their animal really quickly so that you know exactly what pathway to go down with that*" (S1, FG1), *"...and their relationship with the animal, because for some people their pet is an animal, but for some people their pet is part of the family"* (S5, FG3).

### **Affording the client courtesy and respect**

The relationship between veterinarian and client should be based on courtesy and respect; and the different values and opinions held by clients should be respected by the veterinarian. Conversely, a practising veterinarian, who showed disrespectful behaviour towards clients, was noted with disdain by the student who was observing the consultation, e.g. *"...sometimes with clients, it's just ridiculous. His professional skills - makes clients sometimes feel belittled and stuff like that"* (S3, FG 4).

### **Demonstrating reflective listening**

The veterinarian should display behaviours that demonstrate active/reflective listening through, for example, repeating or summarising the client's response or through head nodding, e.g. *"...when you are talking to someone, don't just nod your head but summarise back to them what they have said..."* (S1, FG5).

### **Displaying appropriate non-verbal behaviour**

As part of the commitment to best practice, appropriate non-verbal behaviour contributes to enhancing the veterinarian-client relationship, e.g. *"... be able to read a person and understand...how you'll be coming across to them... their facial expression, whether they're shaking their head, nodding, smiling - all of the nonverbal communication kind of vibes that you get, body language especially"* (S3, FG3).

### **Displaying empathy towards the client**

Displaying empathy towards the client is an essential component of success as a clinical practitioner. Many examples of how empathy could be displayed were

offered, e.g. “...they [the client] say I buy the supermarket [pet] food, I'm like that's alright I do too you know, it's just like a simple kind of thing. (S4, FG3).

On the other hand, whilst recognising the importance of empathy, it should not interfere with the veterinarian's obligation to ensure that clients followed their instructions, e.g. “...we have the empathy we hope...but we still need to communicate to them that they need to do a better job and I still feel like a lot of us will shy away from straight up telling them...” (S5, FG1).

### **Providing clear explanations to the client**

It is important for the client to be kept informed, and for the communication to be easy to understand, e.g. “I usually like to try and just use lay terms cause that's what they [clients] want” (S3, FG2).

This included pitching explanations at the level of the audience receiving it, e.g. “...number one, would be the ability to speak to your audience and be able to either dumb down the language or smart up the language, but use it appropriate to who you are speaking to” (S3, FG1).

### **Resolving disputes with the client amicably**

Veterinary students at Massey University receive training in dispute resolution during their first year of study. As students entered their final year and started to work with clients in the Veterinary Teaching Hospital and private practices, they realised how important it was to have the skills necessary to defuse conflicts, whether these involve clients or work mates, e.g. “Conflict resolution, it's I guess both with clients and with colleagues, you need to be able to do it at both levels” (S4, FG3).

In this context, the ability to be able to read clients' non-verbal behaviour may be a key to dispute resolution, e.g. “...reading people so if people need space, give them space” (S3, FG4).

#### **5.4.2.1.2. Demonstrating accountability and integrity**

This major theme included six minor themes that embraced elements of honesty and trustworthiness and attributes related to the quality of customer service (Figure 5.L).



**Figure 5.L:** The six minor themes under the major theme ‘Demonstrating accountability and integrity’.

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#### **Possessing an entrepreneurial spirit**

The appropriateness of entrepreneurship within the veterinary profession was discussed at length by students during each focus group. The main thread of the conversations revolved around a prevailing belief within the profession that veterinarians should not be primarily motivated by money (despite the perception by the public that all veterinarians are wealthy!). At one extreme of this view, one student equated entrepreneurship with a lack of integrity, e.g. “...if your motivation



*is to make money and finding the best ways to make money then it kind of goes against integrity” (S4, FG5).*

The same student considered that business aspirations should never compromise the core responsibility of animal care and welfare expected from a veterinarian, e.g. *“I think just as long as your core responsibilities as a veterinarian are still being met then go for it - that’s fine; but not if it’s at the detriment of your professionalism...” (S4, FG5).*

At the other end of the scale of opinion, this notion was challenged, on the basis that the desire to make money did not undermine the integrity of the profession, e.g. *“If you think about most other careers...it’s to make money. So why shouldn’t we be making money?” (S3, FG5).*

### **Charging fairly and appropriately**

Related to the discussion above, the need to charge reasonable and appropriate fees for clinical services was highlighted. Students admitted that they were often unaware of the cost of clinical procedures and that, as veterinarians, they would need to take more responsibility for this, e.g. *“I couldn’t, off the top of my head, tell you a basic list of costings even for procedures I’ve seen plenty of times” (S4, FG2).*

Providing clear explanations to clients about potential costs was regarded as critical to help to minimise misunderstandings or clients facing higher than expected expenses, e.g.

*It’s also more about being upfront about the cost too, so ... you’re sort of going: ‘you need this, this, this and this that’s how much it’s going to cost’, and then if you say it right from the beginning they have the expectation that that’s what it’s going to be - rather than you telling them at the end and they go geez that’s \$500... (S2, FG3).*

### **Accepting and admitting mistakes**

It was recognised that mistakes are inevitable in veterinary practice and should be dealt with in an open and transparent manner when they occur, e.g. *“You can chat about [your mistakes]... like I didn’t do that very well and just get it out and deal with it - rather than just not communicate at all”* (S2, FG1).

Discussion in one focus group touched on how many veterinary students were perfectionists and how this would make them feel ill-equipped to cope with making mistakes and managing the repercussions, e.g. *“I find a lot of us in fifth-year are not okay with being wrong. You feel like you have to be perfect all the time and that is something I think people really need to work on”* (S2, FG4).

However, this dislike of being wrong is in tension with the need of students to learn to accept constructive criticism when mistakes had been made and to not become oversensitive and defensive, e.g. *“...it’s like remain open to criticism without being defensive”* (S2, FG4).

### **Accepting responsibility for actions**

Veterinarians need to accept full responsibility for their clinical decisions. This was sometimes equated to demonstrating good leadership, e.g. *“...sticking to your guns and knowing what you value and being willing to represent that”* (S2, FG1).

This is not particularly easy to achieve during clinical rotations, as there is a contradiction between students being encouraged to step up and demonstrate leadership, but, when they do so, they are often admonished by the clinicians for showing too much initiative, e.g. *“...you showed too much initiative yesterday, I went goddammit you gave us a pep talk at the beginning of the week on showing initiative, yeah so...don't even follow through on what they're saying to us”* (S2, FG1).

### **Managing time effectively**

Veterinarians also need to remain accountable for time expectations. This included communicating with clients and colleagues in a timely manner (e.g. returning phone calls, answering e-mails, sending reports) and being punctual for consultations, e.g.

*In the hospital I have had to deal with some clients that were angry from a past incident because they were made to wait for a long time, so they were sitting there angry and loaded up before I got out there (S2, FG5).*

### **Committing to life-long learning**

Finally, in order remain accountable and committed to public service, veterinarians need to be committed to continuing professional development through life-long learning, e.g. “...*just the desire for life-long learning and also being open to new ways and new types of things and not getting stuck in your ways and doing things the same way you have always done them*” (S4, FG5).

### 5.4.2.1.3. **Committing to personal wellbeing**

Eight minor themes were identified that related to this major theme (Figure 5.M)



**Figure 5.M:** The eight minor themes under the major theme ‘Committing to personal wellbeing’.

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#### **Possessing self-awareness and self-regulation**

Self-awareness and self-regulation were recognised as important components of wellbeing, e.g. “...something that’s very important is like having positive coping mechanisms and strategies” (S4, FG2).

Teaching self-regulation to students was, however, recognised as not being devoid of difficulties, e.g. “...self-regulate emotional responses - I think that is absolutely essential but there is a massive challenge in teaching that in a course” (S2, FG5).

Moreover, the current assessment system adopted during clinical rotations in the Veterinary Teaching Hospital had the potential for a negative impact on students' self-regulation strategies, inasmuch as it risked encouraging students to appease the clinical examiners at the expense of their own wellbeing, e.g. *"And because they're the ones assessing us, you act how you think they want you to act, not necessarily what you think is healthy"* (S6, FG3).

### **Enjoying self-confidence**

The students identified this as an important professionalism attribute, especially for new graduates, e.g. *"I think it's quite important to be a young professional, to have a little bit of self-confidence..."* (S6, FG3).

There was, however, concern that many new graduates would not feel sufficiently confident when starting their first job, despite graduating with the latest veterinary knowledge, e.g.

*That fits in with kind of that imposter syndrome I think we all feel, you know, we are the brightest bunch, you know, the newest graduates that are supposed to have the newest education, but we all still feel like we... are worthless to a practice* (S1, FG3).

The issue of new graduates having enough confidence to stand up for themselves was also raised along with the implications to their careers for not doing it, e.g.

*...experience brings self-confidence, but ... you're a brand new practitioner, you don't have the experience, so you don't stand up for yourself, and by the time you have got this experience to stand up for yourself, there's a danger you're burnt out and wanting to leave the profession...* (S6, FG3).

### **Engaging in reflective practice**

Reflective practice was rated highly as a tool for improving clinical practice; and the benefits of engaging in reflective practice with colleagues were noted, e.g. *"...we would kind of look at how we were working together as a group and see where we were inefficient and we...said maybe we should do this or do this, and it was actually really effective"* (S2, FG4).

On the other hand, students who practised self-reflection remarked on how it could be emotionally draining, e.g. *"I do it [self-reflection] all the time, all the time - but like I find it quite exhausting..."* (S3, FG2).

### **Maintaining a positive attitude and sense of humour**

A positive attitude, and sense of humour in the workplace are essential, e.g. *"Maintaining a positive sense of humour is absolutely vital"* (S1, FG2).

Indeed, some employers rate a positive attitude as being more important than academic achievement when selecting job applicants, e.g. *"...they [the employer] say we don't care how well you do at school it's about your attitude"* (S2, FG3).

Emphasis was placed on the power of positive thinking and reminding oneself of what had been done well instead of dwelling on failures, e.g. *"...if you dwell on every mistake you have made, ... like you might have phrased something poorly to a client or you did some technique wrong - then I reckon that is a key for disaster in your future"* (S6, FG1).

### **Demonstrating collegiality and effective teamwork**

This was the attribute relating to 'Committing to personal wellbeing' mentioned the most by students. There were a number of threads to this attribute. For example, it is important to work in a supportive environment in which everyone worked together as a team and where the relationship between veterinarians and their colleagues is valued, e.g. *"You have to see it as a family, and you are all working together towards a common goal..."* (S4, FG1), *"...[Employers] don't*

*want someone that's just a number, just a vet, they want a person that will fit in with everybody"* (S3, FG4).

In this context, group discussion was considered valuable, especially when all the team members share similar concerns, e.g. *"I think just the knowledge that everyone struggles with it is actually a huge help, just that knowledge"* (S3, FG1).

Interestingly, however, the benefits of teamwork were not universally accepted. For example, one student described teamwork as an artificial construct and that the power structures inherent in work-place teams made meaningful collegiality difficult for the more junior team members, e.g.

*So, when the team players aren't all on the same level. Because if you are on the same level, a group of students for example, it is really easy to kind of know how to work within a team but when you have got people on different hierarchies...I found that a bit of a struggle* (S3, FG1).

This sentiment was echoed by another student who complained that one dominant person within any group could jeopardise the team unity and efficiency, e.g. *"...in my group it was one person dominating the whole thing"* (S1, FG2).

### **Possessing resilience**

One student defined resilience as the:

*...ability to perform under pressure, when you have say a client that's getting very upset you have to be able to keep your head and be able to reason through and kind of not really let the client's state hinder your ability to do your job* (S2, FG2).

There was a strong consensus that a degree of resilience was necessary to help navigate the stresses, emotions and demands associated with clinical practice, e.g.

*Having a thick skin or some resilience as well, because there are just going to be people that don't like you, or there's going to be a time where you just cock up and do something wrong and that's that, and you've got to learn how to process it and not actually take it onboard too much (S2, FG2).*

### **Maintaining an optimum work-life balance**

This theme was raised frequently in every focus group. One student noticed that by achieving a satisfactory work-life balance, not only did the veterinarian benefit, but so too did the work colleagues who interacted with them, e.g.

*...so vets who have a good work-life balance come in the clinic on Monday morning and they are cheerful and they can talk to their nurses about what they did over the weekend and their attitude is much better... Whereas those that never see daylight outside of the clinic and that sort of thing are often the ones that are more likely to be snappy and irritated and just less pleasant to work with so it has more effects than just career, it affects those around you as well (S3, FG1).*

Achieving such a balance is in contradiction to the destructive culture prevalent within clinical practice that glamourises long working hours, e.g. *"I still feel like there is a lot of praising of people who are working absurd number of hours... So I think we perpetuate the poor work-life balance because we like this heroic concept of being indestructible"* (S4, FG1), *"...[Clinicians] were like well when I was in vet school, I was doing 15- to 16-hour days and then I'd sleep you know in the foyer and then I'd come back for my next day, and I had to do it so you guys do too"* (S2, FG3).



Students acknowledged that they might initially struggle to achieve an acceptable work-life balance as new graduates, e.g. *“...as new grads we're probably going to struggle with leaving work at work, and leaving home at home, and finding that balance”* (S5, FG3).

The overall message was hopeful, however, and students seemed to understand the importance of finding an optimum work-life balance, e.g. *“We're becoming vets - it's not our sole life - it's just a job that we happen to be doing. We'd like it to be a good job and it can give us a good living, but it doesn't define who we are”* (S3, FG4).

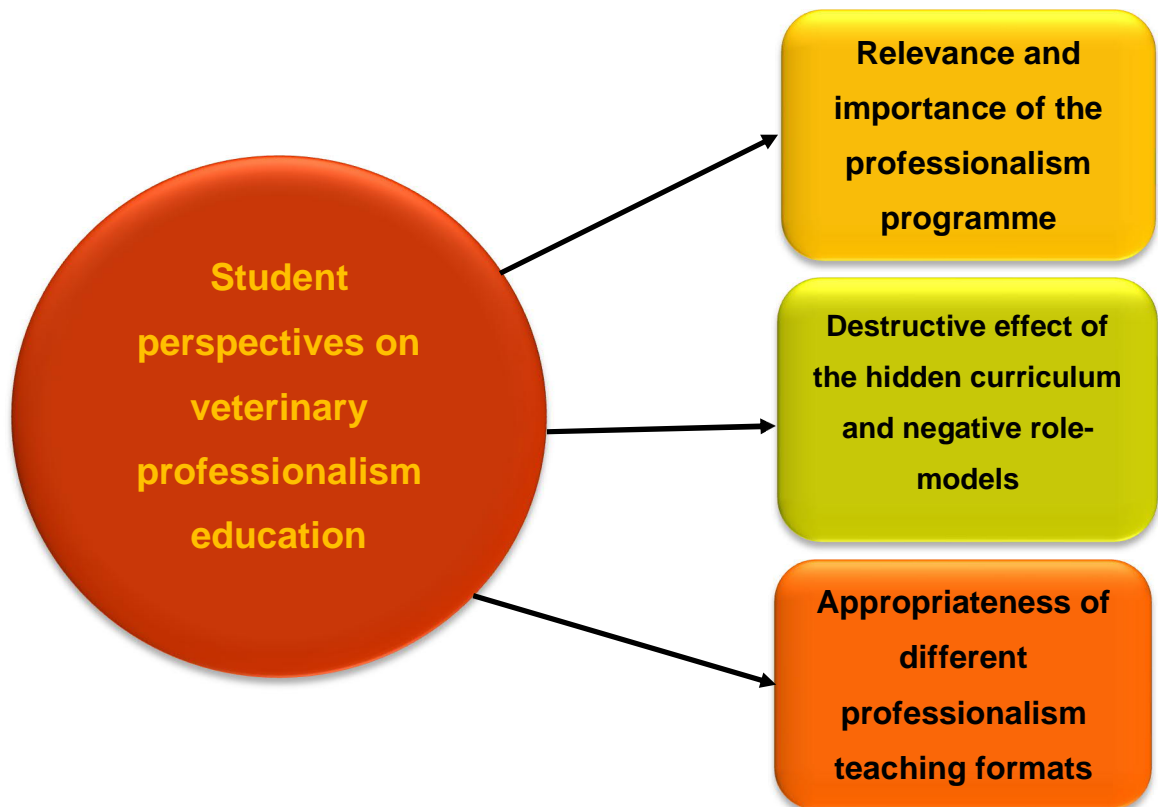
### **Showing adaptability**

The final theme that was identified as an important attribute for working with challenging clients or colleagues was that of adaptability, e.g.

*You need to be able to plan and change...you have to work with so many different people and you don't necessarily get on with everyone or you don't necessarily like everyone, but you have to be able to at least work with them* (S2, FG4).

#### **5.4.2.2. Critique of the current educational programme in veterinary professionalism**

The focus group discussions also included student opinion on the suitability of the current educational programme in veterinary professionalism at Massey University. The overarching theme that emerged from TA of focus group transcripts was: ‘Student perspectives on veterinary professionalism education’. There were various themes under this overarching theme that emerged from discussion on the advantages and disadvantages of the current veterinary professionalism curriculum (Figure 5.N). One theme, ‘Appropriateness of different professionalism teaching formats’ was further divided into eight minor themes (Figure 5.O).



**Figure 5.N:** The three major themes identified under the overarching theme ‘Student perspectives on veterinary professionalism education’.

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#### ***5.4.2.2.1. Relevance and importance of the professionalism programme***

Students remembered questioning the relevance and importance of the veterinary professionalism programme during their first few years of the veterinary degree (as also occurred in response to Question 12 of the questionnaire), e.g. *“I honestly don't believe that first year students are ever going to appreciate professional studies at that [early] stage in their career...”* (S1, FG3).

One reason that was given for this questioning was that students in the early years of the programme were prone to regard the professionalism programme as ‘kids’ stuff’ and that it was more strategic to concentrate on the more traditional content-heavy veterinary subjects such as physiology and anatomy, e.g.

*I think there is so much information in general in the lower years and you really have to prioritise what you are going to focus on and then that just stresses you out more, spending time even on something that might be important but you are saying it is not going to help me right now so... I don't have time to focus on it (S4, FG5).*

The necessity to convince fellow students, especially in the early years of study, about the relevance and importance of the veterinary professionalism programme was highlighted. Participants thought that the final year students bore some responsibility for making the first year students appreciate the significance of this programme, e.g. *"When people [first years] do complain...I would just say – 'yeah we get it, this happens every year, but the course matures as we go so just be patient'"* (S4, FG1), *"When we started off I thought 'what is this, what is this nonsense?'...It's really hard in first year, but I think it's trying to convince people in first year that this is actually really important..."* (S3, FG4).

As one student indicated, the importance of this programme became more apparent during the more clinically orientated final year, e.g. *"Thank you for the last five years of professional studies. We might have hated it at the time but it's definitely important now!"* (S2, FG4).

The relevance of the veterinary business skills component of the professionalism programme was questioned by international students. Three international students complained that the information provided on budgeting, debt reduction and scholarship applications was based on the New Zealand financial environment and was irrelevant to international students, e.g.

*It is really difficult as an international student to sit there for like two hours as they talk about you have access to this loan and you can have access to this scholarship, and you can access this to pay off the debt. And I was sitting there thinking I don't have access to any of those things because I am international, and I have a \$300,000 debt...* (S4, FG1).

The relevance of aspects of the professionalism programme to more mature students was also debated. Those students who had not entered the veterinary degree course straight from school questioned the relevancy of communication skills, business skills and issues related to career development (CV development and job interview skills). They felt that their prior life experience made further instruction in these skills redundant. One mature student questioned the relevancy of training in physical wellbeing, arguing that the physical wellbeing workshop run in the first year of veterinary training was more oriented to 17-year-old school leavers, e.g. “...I was almost 30 and we are talking about how to play soccer... I am like ‘I don’t care!’” (S4, FG1).

### **5.4.2.2.2. Destructive effect of the hidden curriculum and negative role-models**

The detrimental effect of the hidden curriculum on veterinary professionalism development was debated. It was perceived that recent austerity measures adopted by veterinary schools and the desire to run along the lines of a profit-driven business had occurred at the expense of veterinary education, especially the teaching of professionalism, e.g. “But I think there has been a big change like over a number of years from universities being an educational facility to now they’re a business” (S3, FG2).

It was felt that more priority was given to research as this represented a more lucrative income stream than teaching and learning, e.g.

*“...so the more papers you put out, the more grants you get, the more kudos that you get as a researcher so that’s why the emphasis is on that, so they’re there to make money and the fact that it’s a teaching place just happens to go along with it...”* (S3, FG2).

The institutional environment instead needs to support teaching and learning or else there is a risk that the hidden curriculum could undermine the entire professionalism programme. One way of achieving this would be to ensure that the levels of teaching and support staff in the Veterinary Teaching Hospital are sufficient, e.g.

*Massey is understaffed and they need to have the staff to be able to appropriately provide for the patients, and for the students. We can't learn if we are just walking around doing stuff by ourselves all the time because we don't know if it's right or wrong (S2, FG4).*

Congruent with the survey responses, focus group participants emphasised the destructive effect of negative role models who demonstrated unprofessional behaviour in the clinic contrary to the professional standards taught to students during the veterinary professionalism programme, e.g.

*...the hardest part...is not having to talk to the clients, but having your clinician not talk to you about the case - their updates, their plans - and you have to have the clients called before 8.00am but the clinician hasn't told you what their plan is - how the patient is going (S2, FG4).*

The damaging effect of negative role-modelling, often with long-term consequences, was enunciated, e.g. *"just him as a clinician with a student or even just sometimes with clients...that kind of [behaviour] made me feel I don't want to be an equine vet anymore"* (S3, FG4).

#### **5.4.2.2.3. Veterinary professionalism teaching formats**

The appropriateness of different formats for teaching veterinary professionalism was considered. Eight potential aspects of teaching were identified (Figure 5.O) and discussed.



**Figure 5.O:** Formats for teaching veterinary professionalism.

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### **Workshops and tutorials**

As also occurred in response to Question 13 of the questionnaire, most students in the focus groups identified workshops and tutorials as the most appropriate formats to use for teaching veterinary professionalism.

Interestingly, one student felt that workshops and tutorials were only appropriate for introducing basic concepts, whereas mastering professionalism attributes required active practice and application within realistic clinical settings, e.g.

*I think it would be good to start with basic tutorials on what you are trying to achieve, but then make us implement it in other classes because we need to know what we are trying to do before we try to do it. But in saying that, we are going to get more from practising it and applying it and doing it than we are from being talked to about it (S5, FG1).*

### **Formal feedback**

The value of constructive feedback when learning about professionalism was endorsed. Feedback received from clinical staff when applying the principles of professionalism (such as effective communication with clients during structured clinical consultations) was regarded as particularly valuable. There was, however, some dissent over the value of written feedback that was delivered to the students long after the learning experience (or not all), e.g. “*Yeah because we never see our feedback*” (S2, FG3).

### **Group work**

Working in groups was recognised as beneficial, especially as the very act of working harmoniously together in a group required the group participants to demonstrate professional behaviour, e.g.

*It is so easy to switch off when you are in a lecture, but when you are in a small group you actually make eye contact with people and you are actually listening to each other and talking, and I think that is when stuff actually comes out* (S6, FG1).

Furthermore, as well as helping them engage with the professionalism syllabus, group work helped at least some of the students learn about their own strengths and weaknesses, e.g. “*I think I had the opportunity to see what I was good at and to see what I may be needed to work on*” (S2, FG1), and:

*... I really think I'm an awful person to work with sometimes, ... I just had this like realisation ... I need to shut up, like and so from that I made a real conscious effort to shut up for a few minutes* (S5, FG3).

### **Job interview role-plays**

This exercise occurs in final year and involves two randomly selected students within each group competing for a fictitious vacant veterinary position in mock job interviews. The other group members act as the interview panel and determine

which of the two applicants would have been successful. The simulated interviews are overseen by veterinary recruitment experts and practice owners who supply constructive feedback at the end of the exercise. The students in the focus groups expressed tremendous enthusiasm for this exercise, asserting that role-playing (as either the job applicant or the interviewer) helped students acquire professionalism principles such as career development, effective communication skills and veterinary business skills, e.g.

*I was like oh I'm the person being interviewed, like this sucks why me, but then in my job interview some of the questions came up, and I was prepared and having a CV prepared for that scenario...that's a huge advantage (S6, FG3).*

### **Simulated and real consultations**

Students in the focus group generally echoed the sentiments expressed in the survey (Questions 13 and 14) that simulated consultations, conducted with actors playing clients, were artificial and stressful. Others, however, acknowledged that the simulated consultations, conducted in earlier years, served as a good foundation for the real consultations that occurred in fifth year clinical rotations, e.g. "...I think the [simulated] consults that we did were a good way to actually learn it...so as painful as they were, I actually think they were good (S2, FG5), and:

*I think the consults we did in our [clinical] rotations felt a lot more natural than the forced client communication ones we did earlier, but it was good to have those as the foundation because it made us feel more comfortable going into them (S4, FG5).*

### **Reflective assignments**

The advantages of using reflective assignments as a means of reinforcing professionalism principles were underscored. One student recommended keeping a daily reflective diary instead of completing sporadic reflective written



assignments, e.g. *“Rather than just having a reflective essay, maybe people could have the option of having a verbal, maybe a recorded diary and I know it would be a nightmare for whoever is marking it”* (S1, FG5).

### **Positive role-modelling**

As with the responses to Question 12 of the survey, students also recognised the value of clinical staff acting as positive role-models in the Veterinary Teaching Hospital through showcasing exemplary professional behaviour with clients, colleagues and students, e.g. *“We had the [community practitioner] clinicians - they were great...I found all of them to be...really good role models”* (S3, FG5), *“I was witnessing it with a clinician in the room where the client was getting quite angry and you just realised that they were using what we have been taught so that was good to see anyway”* (S4, FG5).

### **Effective mentorship**

The benefit of senior clinicians acting as empathetic mentors to students was also recognised by students, who felt that effective mentorship reinforced principles of professional practice, e.g. *“...whilst they’re kind of just lingering in the corner they’re still there so even if you ... got stuck on something there’s someone right over there that can just tap in”* (S3, FG2).

One student felt, however, that mentors and mentees had to be carefully matched to maximise the benefits to the mentee, e.g. *“to be a mentor ...that can’t just be forced, a forced relationship between two people, yeah it has to be mutual”* (S1, FG2).

## **5.5. Discussion**

### **5.5.1. Overview**

The last 20-30 years have been an era of radical change in medical and veterinary education. There has been a re-focus of curricula away from pre-clinical ‘basic’ sciences towards clinical instruction; a refocus of teaching

methodologies away from teacher-led methods towards student-centred, constructivist methods; a refocus from content solely in the cognitive domain towards the psychomotor and affective domains; and the recognition that graduates have to be fully prepared to become junior practitioners in a practising profession. Critically, veterinary educators have recognised that success as a veterinary practitioner is underpinned by a suite of professional attributes, that graduates need to act according to these attributes as a naturalised part of their behaviour and, perhaps most importantly in the context of the present studies, that such attributes are composed of behaviours and skills that can be taught and learned. Thus, whereas it was traditionally assumed that ‘professional behaviour’ could be learned merely by observing and modelling the behaviour of senior clinical practitioners, there is now a rapidly developing pedagogy around the direct teaching of such behaviour (Lewis and Klausner 2003; Zenner *et al.* 2005; Hess-Holden *et al.* 2019).

Despite the increasing importance attributed to the teaching of professional behaviours and attitudes within primary veterinary programmes, there is scant literature on students’ engagement with this teaching material. The extent to which veterinary students have developed a repertoire of professional skills is likely to be a critical factor in gaining and retaining employment after graduation (Cake *et al.* 2018; 2019). Senior veterinary students are, therefore, key stakeholders of the process of learning professional behaviour. The present study is arguably the most comprehensive and in-depth study of senior students’ burgeoning perceptions of professionalism that has yet been undertaken.

### **5.5.2. Student respondents’ demographic considerations**

As with first year students, there were no differences in final year student opinion based on gender or ethnic background. With age, the younger final year students (20-25-years-old), rated the self-development attributes as more important than their older class colleagues. Clearly younger students apportioned more importance to self-regulation, self-management and personal wellbeing than their older classmates. These results were consistent with the findings of Heath *et al.* (1996) and Tinga *et al.* (2001) in studies of veterinary students, which indicated

that students focused less on self-development attributes and more on relationship building skills over the course of their training programme as their experience increased. These findings were corroborated by Torres *et al.* (2019) in a study on veterinary clients, showing that older respondents tended to rate relationship building attributes as more important than younger owners.

### **5.5.3. Attributes of veterinary professionalism considered important by final year veterinary students**

The key finding was a commitment to best practice through effective communication, rapport building, accountability, integrity, public service and maintaining optimum personal wellbeing. It is interesting to note, therefore, that Butler *et al.* (2002) reported that 65% of final year veterinary students felt that they had not received adequate training to communicate effectively with distressed clients. Similarly, Tinga *et al.* (2001) found that 45% of final year veterinary students admitted not feeling competent in their ability to communicate with owners when delivering bad news about the animal's condition. If veterinary students are not afforded the opportunity to learn and practise communication skills in all clinical situations, client interactions tend to become a source of stress and discomfort to the veterinarian (Hess-Holden 2017).

Final year veterinary students rated the importance of relationship building attributes more highly than did the first year veterinary students reported in Chapter 4. While veterinary students appear to start their veterinary degree focused on personal wellbeing, they seem to gain an appreciation for the relationship building skills during the programme that should help to foster good veterinarian-client and veterinarian-veterinarian relationships. Conversely, many task-oriented attributes were ranked as unimportant by final year students. These included planning, organisation, innovation, business acumen, market strategies and marshalling resources to achieve goals. The value of these attributes would possibly not be appreciated by students yet to enter the workplace.

Several aspects of building the veterinarian-client relationship were further elaborated in discussion: these included treating the client with respect, drawing the client into decision-making processes, establishing a mutually agreeable

agenda with the client, providing clear explanations, and avoiding technical 'gobbledegook'. The students' opinions in the present study therefore supported the ideas of Cake *et al.* (2019) that collaborative decision-making and establishing mutually agreeable agendas with the client help to nurture good veterinarian-client relationships and foster trustworthiness. To achieve such collaboration, the veterinarian not only needs to explain the rationale for the various procedures that are being conducted or proposed, but also, the students noted, to offer the client informed choices in the process. In other words, the veterinarian needs to refrain from only providing directives to the client but also needs to aim to include the client in the decision-making processes. Such conclusions were also made by Radford *et al.* (2006) and Cake *et al.* (2018), whilst Hughes *et al.* (2018) similarly reported that clients preferred the veterinarian to respect them and trust their judgement. Of course, there are two sides to the coin as far as empowering clients to make decisions is concerned. Lisska (2004), for example, reported that most physicians over-estimate their patients' desires to make their own decisions. Likewise, Levinson *et al.* (2005) found that over half of medical patients prefer to leave final treatment decisions to the doctor.

The ability of the client to make an informed decision is, of course, dependent upon the clarity of the explanation that is given by the veterinarian. Hence, the students highlighted the necessity for veterinarians to provide clients with clear explanations using concise and easily understood language. This opinion was corroborated in a study conducted by Mellanby *et al.* (2011), who defined a good veterinarian as someone who was 'good at explaining technical terms'. Excessive use of technical jargon should be resisted to avoid confusing or overwhelming clients (Adams and Kurtz 2006). Instead, veterinarians should solicit the clients' concerns, thoughts and feelings about the information given by offering them the opportunity to ask questions, seek clarification or express doubts (Radford *et al.* 2006).

Sadly, many veterinarians do not achieve this rapport with their clients. Dysart *et al.* (2011) analysed recordings from 334 veterinary consultations and found that in 63% of consultations, the veterinarian did not establish the client's concerns.

In those consultations in which the veterinarian did ask the client's concerns, the veterinarian usually interrupted the client before the response was completed. Nonetheless, in the 'Communication Skills' theme, students recognised the importance of veterinarians demonstrating reflective listening during a clinical interaction with a client. Reflective listening would allow both parties to clarify, expand on and correct information as it was presented during a consultation, thus enhancing the accuracy and value of the information-gathering process (McDermott 2018). Reflective listening should, ideally, be practised to the point that veterinarians should invite clients to inform them if they felt that they were not being listened to adequately (McDermott 2018).

Displaying empathy towards the client was also identified as an important veterinary professionalism attribute by students. Empathy has been described as the foundation of other attributes including effective communication and trustworthiness and helps to establish trust and respect and foster effective relationships with the client (Cake *et al.* 2018). McArthur and Fitzgerald (2013) found, however, that empathetic statements were not expressed towards the client or patient in 59% of observed veterinary consultations. Empathy towards the client should be used to communicate understanding and appreciation of the client's feelings or predicament (Radford *et al.* 2006). On the other hand, some students emphasised the necessity for veterinarians to be able to balance their empathy towards the clients and the patient to ensure that the animal's welfare was never compromised. In addition, it was made clear that the veterinarian must avoid the risk of the client expecting excessive empathy and compassion to take precedence over monetary considerations and the veterinarian's mental wellbeing. The veterinary profession is renowned for being very compassionate and caring; and veterinarians are extremely susceptible to experiencing the negative effects of compassion including compassion fatigue and burnout (Gavzer 1989; Cohen 2007; Hess-Holden 2017).

The importance of veterinarians acknowledging and validating the human-animal bond that exists between owners and their pets was underlined by the students. Timmins (2008) similarly emphasised the importance of understanding and supporting the attachment between the client and the animal. In addition, Martin

and Taunton (2006) reported that veterinarians who recognised and validated the human-animal bond had an increased likelihood of enjoying success in their practice. Since many companion animals are now considered as family members, or even children to their owners, Hess-Holden (2017) reported that many clients had started to expect that their veterinarian should function more like a pediatrician for a child rather than a veterinarian for an animal. Despite these findings, Tinga *et al.* (2001) found that 21% of final year veterinary students did not feel competent in assessing the strength of the attachment of the owner with their animal. In the present study, students reported similar sentiments and acknowledged that more training activities that would help them understand and appreciate the depth of the bond between owners and companion animals would be useful.

Other attributes were identified by students that were not directly focused on the veterinarian-client interaction. Prominent amongst these attributes were a commitment to life-long learning, effective time management and developing business skills. It was interesting that senior students had already recognised the need for a commitment to life-long learning. From the perspective of the University, this highlights the necessity for educational institutions to focus on creating adaptive learners that can thrive in the workplace. From the prospective graduate's perspective, such life-long learning should involve a continuous process of acquiring new knowledge and skills, implementing recommendations received through constructive feedback and learning from mistakes (Casner-Lotto and Barrington 2006). Fife *et al.* (2000) noted that employees need to continuously enhance their skills and competencies through continued education to be able to adapt to the continuously changing work environment. Farias (2016) found that many employers regarded the willingness of graduates to continue to update their skills and knowledge as more important than excess technical knowledge. In Chapter 7 (client complaints), it is clear that a failure to commit to life-long learning can lead to client dissatisfaction and make veterinarians vulnerable to complaints being laid against them.

Managing time effectively was also identified as an important attribute of professionalism. Perhaps the overloaded primary veterinary degree programme

had already given the students strong insights into the perils of poor time management! Time management has been identified as a challenging aspect of veterinary professional life (Riggs *et al.* 2001). The students' standpoint was supported by Cake *et al.* (2018) who maintained that poor time management by veterinarians could manifest in prolonged work hours and poor work-life balance. While students stressed the necessity for veterinarians to be punctual for work commitments, Cake *et al.* (2018) cautioned that whilst clients appreciated punctuality and time efficiency during clinical consultations, they did not like to feel that they were being rushed.

There was an interesting dichotomy of opinion regarding veterinary business acumen. In the focus groups, business skills were regarded as a positive attribute, whereas in the free response component of the online survey, veterinary business skills were identified by some students as one of the most important professionalism attributes and by others as the least important attribute for career success. On the positive side, the students felt that business skills would lead to greater job satisfaction as they could exert more control over their financial circumstances. In addition, business skills would enable the veterinarian to charge the client fairly and appropriately and thus increase client satisfaction. This viewpoint enjoys some support in the veterinary literature. Miller *et al.* (2004) reported that a sound knowledge of financial and practice management, including understanding accounting principles and establishing each veterinarian's financial worth to the practice, was an essential competency needed by new veterinary graduates. Cake *et al.* (2013), however, found that business skills were perceived to be a major deficiency in new veterinary graduates despite the demand by employers for competence in financial and practice management skills. These findings were echoed by Bachynskey *et al.* (2013) who reported that new veterinary graduates found dealing with the financial aspects of practice a significant problem during the transition to work. This underscores the necessity for educational institutions to provide comprehensive veterinary business training programmes so that veterinary graduates are equipped to cope with the financial aspects of veterinary practice. On the other hand, Cake *et al.* (2013) found that, although the inclusion of business skills within veterinary professionalism competency frameworks was associated with improved employability, income

and employer satisfaction, veterinary business skills were often rated with lower importance in surveys by veterinary students and new graduates.

A dichotomy clearly exists in veterinary students' opinions on the importance of business skills, which may be understood with respect to the data from the focus groups. These discussions revealed that some students regard veterinary science as a vocation and are not motivated by money or wealth creation, whereas others regard veterinary business skills as important attributes to ensure optimal financial success and wealth.

More personally oriented attributes of professionalism that should support career success were identified, including personal wellbeing, work-life balance and adaptability. Good personal wellbeing was identified as a prerequisite to enjoying successful practice. Moreover, optimum wellbeing was thought to be enhanced by collegiality and effective teamwork. Previous studies lend credence to these findings. Cake *et al.* (2018) recognised collegiality and effective teamwork as essential components of veterinary practice leading to improved staff satisfaction, motivation and productivity. Teamwork and collegiality were identified as essential requirements by veterinary employers by Lewis and Klausner (2003) and Schull *et al.* (2012). Mossop (2012a) emphasised the importance of teaching teamwork at an early stage in the veterinary professionalism curriculum as learning in a team could enhance aspects of professionalism.

The veterinary profession has been recognised as a stressful occupation; something that was recognised by the students by identifying the need to maintain an optimum work-life balance as a vital component of wellbeing. Veterinarians grappling with issues such as excessive workloads, unclear job descriptions, long working hours, unexpected clinical outcomes, challenging interactions with clients and fear of complaints or making mistakes have been cited as common reasons for distress (Moir and Van den Brink 2020). Veterinarians have identified the long hours worked as one of the greatest workplace stressors and stress, illness and fatigue have been blamed for causing clinical errors in veterinary practice (Bartram *et al.* 2009; Oxtoby *et al.* 2015).



The final attribute that students identified was the ability to be adaptable. In the literature, adaptability is held to improve graduates' employability and prepare them for the increasing pace of change and innovation occurring in today's veterinary work environment (May 2008; Armitage-Chan *et al.* 2016). Likewise, Farias (2016) underlined the necessity for flexibility so that employees could function competently within roles different from their particular area of expertise. It was suggested that being a 'Jack of all trades, master of none' was a good premise in today's employment marketplace (Farias 2016).

### **5.5.4. Student opinion on veterinary professionalism education**

Despite being recognised as intrinsic to practice, it is still challenging to integrate professionalism into veterinary qualifications such that its importance to students is made explicit (O'Sullivan *et al.* 2012). Many final year students in the present study confessed that they had struggled to see the relevance of veterinary professionalism instruction in the early years of the programme. These findings were consistent with Tinga *et al.* (2001), who showed that Canadian veterinary students, enrolled in the first three years of a four year Doctor of Veterinary Medicine programme, valued technical skills more than professionalism skills. Likewise, Heath *et al.* (1996) found that Australian veterinary students' perceptions of the value and relevance of communication skills only increased with time and experience. These sentiments were echoed by senior medical students in a study conducted by Birden and Usherwood (2013). Those students felt that professionalism should be taught within a clinical context, later in their medical training and not as a standalone didactic module removed from their clinical experience. This stands in contrast to the findings of Goldie *et al.* (2007) where first and second year medical students in the United Kingdom expressed appreciation for the formal integration of medical professionalism teaching into the curriculum.

There is clearly a need for the teaching of professionalism to be aligned to clinical practice to provide it with relevancy. This is particularly challenging during the early years of a veterinary programme. This could perhaps be achieved by providing students with learning experiences that mimic their future roles as

professionals and, even better, if this were to include allowing students to experience clinical contact during the early stages of the curriculum. This would help them contextualise and integrate their learning and provide experiences on which to reflect (Goldie *et al.* 2007).

Many of the students who questioned the relevancy of the professionalism programme were the mature students and international students with more extensive life experiences. Students with such prior experience or with strengths in a particular domain may have had difficulty looking past their own experiences and might have viewed the topic from a subjective perspective. Such students would undoubtedly hold a different opinion on the importance of an attribute compared to a student with no experience or ability in that domain (Kelly *et al.* 2016).

Within this context, it was interesting to learn about students' perspectives on the strengths and weaknesses of different modalities for teaching and learning about professionalism. Firstly, they identified workshops, tutorials and small group work as suitable modalities of instruction. Small group formats, with a case-based learning approach, allow students to acquire both propositional knowledge and the procedural knowledge required for professional development. In small groups, students can express their pre-existing assumptions and perspectives and be challenged on them within a safe learning environment. Furthermore, small group learning has been demonstrated to promote critical reflection (Goldie *et al.* 2007).

Reflective assignments were also identified by students as effective professionalism teaching and assessment formats. This is in marked contrast to the opinions of Australian medical students in the study of Birden and Usherwood (2013). Those students regarded reflective assignments and portfolios as artificial and restrictive. They used terms such as 'stupid' and 'a waste of time' to describe these forms of learning and assessment and complained that they were marked in a cursory fashion despite the effort put into them. This resulted in students completing reflective assessments to achieve a grade and not as an exercise to truly reflect on their feelings and experiences (Birden and Usherwood 2013). This

created the risk of students going through the motions of acting professionally without fundamentally believing in the virtues underpinning professionalism. These divergating findings need to be considered carefully in thinking about appropriate ways to instil reflective practice in students during their primary degree. It is clearly essential that reflective practice remains integral to professional development and should be sustained throughout the curriculum (Goldie *et al.* 2007), but the tools for doing so are often blunt and run a high risk of long-term or permanent rejection if mishandled at the pre-graduation stage.

Mentoring relationships and role models were identified by students as effective means of showcasing the principles of professionalism. This aligns with the work of Clark *et al.* (2008) and O'Sullivan and McKimm (2011) who found that mentoring schemes for medical students during curricular and extracurricular activities, using effective role models, were key to developing professionalism values. Likewise, clinical role models were recognised by the students as playing an important part in the development of professionalism. Positive role models within clinical situations remain central to the process of student socialisation while negative role models have a pervasive and destructive influence (Goldie *et al.* 2007). Positive clinical role-models should *'incite admiration and provide inspiration... as students aspire to emulate their example'* (Schull *et al.* 2012, p 263). Stern (2003) argued, however, that professionalism could not be taught by role modelling alone. It may be unrealistic to rely solely on observation and role modelling, usually only in the clinical setting, for students to learn professionalism (Mossop and Cobb 2013). Instead, professionalism teaching could be achieved through encouraging academic and clinical staff to have conversations with students about real-life events that challenged the ideas of how a good clinician should behave. Recognising and critically analysing events that reflect professional behaviour allows the students to become their own teachers of professionalism (Stern 2003).

Conversely, although the importance of mentoring relationships and role models in shaping student professionalism has been highlighted, some veterinary students confessed to having had more experiences with negative role models than positive ones. Professional behaviour and attitudes can be undermined by

repeated exposure to negative role modelling in clinical settings and could result in students developing a tolerance for this type of practice. This tolerance may be further enhanced by students' perceived lack of power within their institutions, fear of repercussions, a lack of remediation once unprofessional behaviour has been identified, as well as students' lack of confidence in their own judgement (Bryden *et al.* 2010). Grogan (2013) thought that there was some residual benefit from negative role models inasmuch as students can make their own choice as to which role model they wish to emulate. Furthermore, students can identify the characteristics, which define these negative role models, and critically reflect on their influence (Goldie *et al.* 2007).

The students remarked on how the culture of competitiveness that prevailed in the veterinary school undermined the rigour and diligence of the intended veterinary professionalism outcomes of the formal curriculum. The veterinary professionalism curriculum was further undermined by the negative perception of many veterinary students towards the veterinary professionalism programme, especially during the early years. Fehser (2002), Skiles (2005) and Birden and Usherwood (2013) similarly reported negative student attitudes towards the undergraduate medical professionalism training programmes under their review.

To promote a culture within a veterinary undergraduate curriculum that values professionalism requires the active participation of deans, programme directors, heads of departments, curriculum developers and, most importantly, the students. Authorities need to signal the importance of professionalism training, support the incorporation of this training into the curriculum and allocate resources (space, time, equipment etc.) to enhance this training (Cruess and Cruess 2006).

### **5.6. Summary**

The key findings of this chapter are that final year veterinary students regarded the commitment to best practice as the core professionalism attribute for a veterinarian to enjoy career success. This commitment to best practice was underscored by relationship-centred veterinary care, based on collaborative

veterinarian-client partnerships. Students felt that relationship-centred veterinary care required the veterinarian to show accountability and to act with integrity. They also highlighted the necessity for a veterinarian to communicate effectively with the client and recognise the client's perspectives and expertise through shared negotiations. In addition, students considered that veterinarians should maintain an optimum state of wellbeing in order to realise their own potential, work productively, cope with unexpected outcomes and contribute meaningfully with their community (Moir and Van den Brink 2020).

Students also provided insightful feedback on the current veterinary professionalism teaching programme at Massey University. They highlighted the need for clinically oriented teaching and learning in the early years of the curriculum to underscore the relevancy of professionalism instruction. Small group work and reflective activities were identified as suitable teaching formats for the professionalism curriculum, although students also emphasised the value of positive role-modelling and effective mentorship to help advocate appropriate professional practice.

Insight into veterinary students' opinions on the teaching and assessment of professionalism in the primary veterinary curriculum will help to shape future education programmes for the development of professional behaviours and attitudes in the veterinary community.

## **6. The clinical veterinary practitioners' voice: Using the critical incident technique to determine important veterinary professionalism attributes for career success**

### **6.1. Overview**

This chapter presents a phenomenological study using a critical incident technique (CIT) and a constructivist grounded theory (GT) approach. The chapter addresses the fourth research question, namely what are the perspectives of practising clinical veterinarians on veterinary professionalism attributes that they deem important for continuing career success as a clinical practitioner?

The Methods section includes a description of the selection of the cohort of participants, an explanation of the CIT for data collection, the framework of the phenomenological/constructivist GT research design, and the rationale for choosing this approach. This is followed by a description of the thematic analysis (TA) of the data. The Results section describes the attributes of professionalism that clinical practitioners considered to have contributed either towards positive critical incidents, or which, when lacking, contributed towards negative critical incidents. The chapter represents the first time that veterinary perspectives on professionalism have been obtained, using a CIT.

### **6.2. Introduction**

Veterinary professional identity remains in constant flux as societal influence and expectations influence the role of practitioners (Armitage-Chan *et al.* 2016). Key challenges faced by veterinarians include keeping knowledge and praxis current within a rapidly changing profession; obtaining both business and political acumen; and assessing and meeting the needs of clients and other stakeholders. No less important are the attributes of self-care, including the ability to balance personal and professional goals (Lewis and Klausner 2003). Within recent decades, for example, there has been a shift from single-veterinarian practices

to large multi-veterinarian corporate models and from uninsured clients to clients enjoying full pet insurance. This has resulted in an increased requirement for the provision of specialised referral care (Armitage-Chan *et al.* 2016). It is opportune, therefore, to solicit the thoughts of veterinarians on those attributes of professionalism that are required to flourish in modern clinical practice.

Previous research has examined attributes of professionalism that veterinary employers expect in graduating veterinarians (Heath and Mills 2000; Walsh *et al.* 2001; Walsh *et al.* 2002; Butler 2003; Doucet and Vrins 2009), but little attention has been paid to what practising veterinarians themselves consider to be important attributes for career success. Mellanby *et al.* (2011) surveyed small animal veterinarians in the United Kingdom to determine what attributes they considered constituted a 'good' veterinarian. The veterinarians identified good communication skills as an extremely important attribute, but rated professional appearance, likeable personality and politeness as less important (Mellanby *et al.* 2011).

In order to determine attributes regarded as important indicators of professionalism by New Zealand veterinarians, interviews were conducted with practising veterinarians using the CIT. The hallmark of a CIT study is the focus on real events rather than abstract concepts. It involves asking participants to recount actual incidents that they have experienced (Silva *et al.* 2016). The CIT was first developed by Flanagan (1954) for collecting direct observations of military pilots' behaviour during critical incidents in aviation activity to facilitate their potential usefulness in solving practical problems and developing psychological principles. Written or oral critical incident reports can be used to generate hypotheses about, and identify underlying minor and major themes related to, practitioners' perceptions (Branch 2005). Dunn *et al.* (1985) stated that the CIT could provide details of where professionals see their activities as being important. It could also facilitate the construction of guidelines that would inform development of an educational program designed to maintain and improve professional standards.

The use of a critical incident framework is a relatively new phenomenological approach to understanding professional behaviour. There are some reports of its use in health sciences to distinguish the features of competent practice (e.g. medicine: Branch 2005; pharmacy: McMillan *et al.* 2018; nursing: Crouch 1991; Keatinge 2002; Silva *et al.* 2016), although its use in veterinary medicine has been limited. Hartnack *et al.* (2013) explored whether the CIT could be used to improve safety in equine anaesthesia, while Hofmeister *et al.* (2018) applied the CIT methodology to a series of perianaesthetic cardiac arrest events in dogs and cats to describe the factors that contributed to cardiac arrest. Jiji and Kaul (2008; 2011) used the CIT to determine the role expectations of veterinarians in India by different stakeholders in the veterinary community.

The purpose of this study was to gather and analyse the narratives of practising clinical veterinarians in New Zealand about positive and negative veterinarian-client interactions, using a CIT approach. Through TA of transcripts of the veterinarians' narratives, veterinary professionalism attributes were identified that were either engaged by the veterinarians to create a positive veterinarian-client interaction; or were deficient during a veterinarian-client interaction resulting in a negative clinical experience; or were engaged by the veterinarian to help mitigate a negative veterinarian-client interaction. This study represents the first time the CIT has been used to report qualitative research on veterinary professionalism.

### **6.3. Methods**

This phenomenological study used a critical incident research method from the constructivist GT data analysis perspective (Glaser and Strauss 1967; Charmaz 2014; Corbin and Strauss 2014). Grounded theory data collection is dependent on in-depth interviews as participants can most fully express their understanding of phenomena through narration (Creswell and Poth 2017). The phenomenological approach was used to provide a description of critical incidents as consciously experienced by the veterinary practitioners living those experiences. Phenomenology explored the participants' experience of critical incidents, while GT explored the process of each incident.



### **6.3.1. Sampling methods/recruitment**

Participants were recruited using a mixture of criterion-related purposive sampling, convenience sampling, opportunistic recruitment and snowball sampling. Koerber and McMichael (2008) described these techniques as mutually exclusive but Allen (2014) insisted that they could be used together to produce a robust purposeful sample.

In line with GT principles, the sampling process proceeded on theoretical grounds, meaning that the study sample was not set prior to starting the data collection. Furthermore, the sampling method for participants was iterative. This iterative process allowed the data collected to reshape the theory and to inform the next stage of the analysis (Mossop 2012a). This meant that the selection of each participating veterinarian depended on the outcome of the previous analysis as selection occurred in parallel with data collection. These analytical considerations informed decisions as to whether to modify the interview questions or recruit another participant who might provide a contrasting perspective. The participants were, therefore, selected purposefully as the analysis progressed, for their ability to provide data that would confirm, challenge or expand the emerging theory (Kennedy and Lingard 2006). This ongoing iterative cycle led to further adaptations of the data collection process, until the study was complete.

The present study used both criterion-based purposive sampling and convenience sampling to identify and select participants who met the predetermined criteria of interest. In this case, the criteria were practising clinical veterinarians in New Zealand who were willing to take part in the study. A mix of early career veterinarians (<10-years' experience) and later career veterinarians (≥10-years' experience) was sought as was a representative proportion of male and female veterinarians.

Preliminary selection of participants was based on responses to an advertisement recruiting for the study in the e-newsletter of the Veterinary Council of New Zealand. Respondents who met the criteria were further selected for their availability. In addition, snowball sampling (Noy 2008) was utilised as the

participants often recommended a colleague who matched the selection criteria and these colleagues in turn were approached about study participation. These forms of sampling allowed the selection of a variety of clinical practitioners with diverse experiences of client interaction within a clinical setting. Sampling continued until saturation was achieved. This was the point at which the ongoing analysis of new data was not producing any new insights relevant to the emergent theory (Kennedy and Lingard 2006).

### **6.3.2. The critical incident interview technique**

Critical incident interviews were conducted to identify the range of veterinary professionalism attributes identified by clinical practitioners as important components of successful clinical practice.

Pilot interviews using an established interview protocol (Appendix 6.A) were undertaken with three colleagues working as clinical veterinarians at Massey University. Based on their feedback, minor modifications were made to the interview protocol in order to better enable participants to narrate their experiences and demonstrate their understanding of those experiences.

At the beginning of each interview, participants were asked to confirm their demographic details, including the number of years of veterinary clinical experience. Critical incidents were collected by asking each respondent to recollect and narrate a significant positive and a significant negative critical incident in their clinical career. In the present context, a 'critical incident' referred to a particularly demanding veterinarian-client interaction that had either a positive or a negative outcome. It was emphasised to participants that the term 'critical' did not mean life-threatening, but instead referred to a significant situation, event or opportunity that had occurred in practice, and which had the potential to provide insight or stimulate professionalism development (Flanagan 1954).

For each incident the following information was determined: the setting/context in which the incident took place, exactly what occurred, those involved (clients,

other veterinary staff, animals), the time period, the effects of the incident (positive or negative), a description of the outcome, and why the incident was considered to be effective or ineffective practice. During these interview sessions, the professional skills that the veterinarian believed contributed to a successful outcome, or those professional skills that were deficient and resulted in an unsuccessful outcome, were elucidated. The critical incident interviews were interactive with only open-ended questions used to prompt the participants (Corbin and Strauss 2014). Two main areas needed to be explored during the critical incident interviews. The first was to ask what the participant experienced and the second was to establish how the participant understood that experience (Flanagan 1954).

Initially, comments and questions were asked to introduce and define the concept of critical incidents and to get each participant to explore personal positive and negative critical incidents in clinical practice. Follow up questions were then used to clarify or expand details offered and to explore the participant's understanding of the issues raised. For a critical incident report to be effective and useful, it must contain the description of the situation which led to the incident, the actions or behaviours of the participants in the incident and the outcomes of the behavioural actions (Cox *et al.* 1993), so the respondents were encouraged to describe each incident in detail.

It was important, however, to not probe too deeply and to allow the participant the freedom to talk without interruption and without influence. Depth can be created during an interview if the participant is allowed to explore issues without limitations (Rubin and Rubin 2011). No direct questions on professionalism were asked during the interviews. Instead, the important professionalism attributes were determined through analysing authentic narratives about veterinarian-client interactions. The participants did not feel pressured to narrate their experiences using a preconceived framework or structure. Instead, the participants were able to develop their own context from their own perspectives (Hughes 2008).

### **6.3.3. Interview setting**

In order to maintain a high level of respect and trust between interviewer and interviewee, a safe environment was created for the critical incident interviews to be conducted. Provision was also made for the interview to be abruptly terminated if the veterinarian felt too uncomfortable to proceed (this, however, did not happen during any of the 22 interviews).

It is well recognised that the setting of the interview can have a marked influence on the participant's responses. Stacks (2016) recommended that interviews be conducted in the participant's office or home to help the interviewee feel relaxed and secure. For this research, most interviews were conducted face-to-face, while some were conducted through Skype video calls. On-location data collection is preferred for qualitative studies (Krueger and Casey 2014) especially as the participants' selected settings can often be revealing and give the researcher an idea about the personality of the interviewee (Stacks 2016). Furthermore, face-to-face interviews allowed the interviewer to observe and react to nonverbal communication and to probe for in-depth responses. However, distance between the interviewer's and the interviewees' locations and the busy schedules of the participants necessitated the use of Skype video calls for some participants.

### **6.3.4. Ethical approval and informed consent**

Management of ethical issues was important for the study, as there was a potential for the researcher's intentions and the rights of the participants to come into conflict. It was important, therefore, to identify all the potential ethical issues inherent in this study and to acknowledge and address them. Confidentiality and consent were identified as major issues and were addressed by asking all participating veterinarians to sign a consent form (Appendix 6.B) with the assurance of confidentiality outlined in the accompanying information sheet (Appendix 6.C). The information sheet also explained the study's purpose and the further rights of the participants. To ensure confidence and encourage full disclosure of sensitive case interactions with clients, all participants were assured

that the details of the discussion would be anonymised, and strict confidence maintained.

The study was undertaken with ethics approval from the Massey University Human Ethics Committee (*MUHEC Low Risk Notification: 4000017054*).

### **6.3.5. Preparation of transcripts**

All participant information and critical incident narratives (both audio recordings and transcripts of the recordings) were kept in password-protected files on a secure computer. The interviews were digitally recorded using an Olympus WS-853 Digital Voice Recorder. After the completion of each interview, the audio recordings were transcribed *verbatim* using a professional transcribing company (Fullstop Digital, Wellington, New Zealand).

Each transcript was checked for accuracy by the interviewer, then was returned to the relevant participant to verify that the transcript represented a true reflection of what had been narrated. Cross-checking afforded the participants the opportunity to check the contents, confirm the accuracy of the transcription and determine the extent to which the transcripts reflected their individual experiences. Individual participants and any other parties mentioned in the interviews were anonymised to maintain confidentiality.

### **6.3.6. Thematic analysis of transcripts**

Transcripts were uploaded to NVivo Version 12 (QSR International, Melbourne, Victoria, Australia) to facilitate the process of analysis. As in Chapter 5, the six-step process of TA, as described by Braun and Clarke (2006; 2014) and Maguire and Delahunt (2017), was used as an inclusive and inductive qualitative strategy to conduct an exploratory analysis of the data. The interpretive analysis of the transcript of the first critical incident narrative served as a basis for an evolving and iterative coding system in which data were organised into meaningful categories. This then provided the direction for further exploration of subsequent transcripts (Phillips *et al.* 2017).

The transcripts were read, coded and systematically analysed to identify new or recurring codes during the interactions between veterinarians and clients. Sometimes multiple codes were assigned to the same statement from the transcripts. Plentiful quotations (or exemplar statements) were provided for each code to verify the analysis of the actual words spoken by the participating veterinarians.

Similar or overlapping codes were then grouped thematically into more abstract organising categories or minor themes. In this way, the attributes that were associated with positive critical incidents between veterinarians and clients and which, when deficient, were associated with negative critical incidents, progressively emerged from the data. This iterative process facilitated the emergence of minor themes not constrained by predetermined categories. The properties and dimensions of each of these minor themes were then further analysed and overarching major themes were compiled that were relevant across several of the key minor themes. Appendix 6.D shows a screen shot of the NVivo coding process. As the ongoing comparison of minor themes occurred, the process of memo-writing (Appendix 6.E) was adopted to allow the theory to emerge at progressive levels of abstraction. Memos were written to define the characteristics of the major and minor themes and to develop and formulate emergent theoretical constructs. The analysis process was complete when the theoretical formulations produced an understanding and explanation of the social phenomenon under study. This theory, through the iterative process used in its development, was, therefore, grounded in the data (Kennedy and Lingard 2006).

To increase the reliability of the data, the coding structure and the different interpretations were independently reviewed by two co-researchers (DG and TP) and resolved to consensus through iterative discussion between all three investigators.

## 6.4. Results

Fourteen interviews were conducted face-to-face at the participants' place of work, two were conducted in the researcher's office and one interview was held in a private room at a conference centre. Six interviews were conducted through Skype video calls. The duration of each interview ranged from 45 to 60 minutes. Transcripts of the critical incident interviews ranged from 10 to 15 pages long (single-spaced, 40 lines per page). Saturation was achieved after analysis of the transcripts of 22 interviews. Creswell (2012) reported 3 to 10 units as a typical number of subjects included by researchers using various methodologies although recommended the recruitment of 20-30 subjects to ensure that saturation was achieved effectively. The sample of 22 veterinarians interviewed comprised:

- 11 (50%) early career veterinarians (<10-years' experience) and 11 (50%) later career veterinarians (≥10-years' experience)
- 14 (64%) female veterinarians and 8 (36%) male veterinarians
- 12 (55%) large animal or equine veterinarians, 6 (27%) companion animal veterinarians and 4 (18%) mixed practice veterinarians.

Twenty-one participants came from clinical practices in the lower North Island of New Zealand and the remaining participant was based in Auckland.

The overarching theme that emerged was that of building a relationship between the veterinarian and the client. Four major themes were identified: accountability and integrity, communication skills, personal wellbeing, and quality of care (Figure 6.A).



**Figure 6.A:** The four major themes under the overarching theme of ‘Building relationships between the veterinarian and the client’.

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Underneath these major themes, 26 minor themes were nested. Each of these minor themes was supported by veterinarians’ comments (exemplar statements) and are described below:

#### **6.4.1. Accountability and integrity**

Five minor themes were identified that related to this major theme (Figure 6.B).

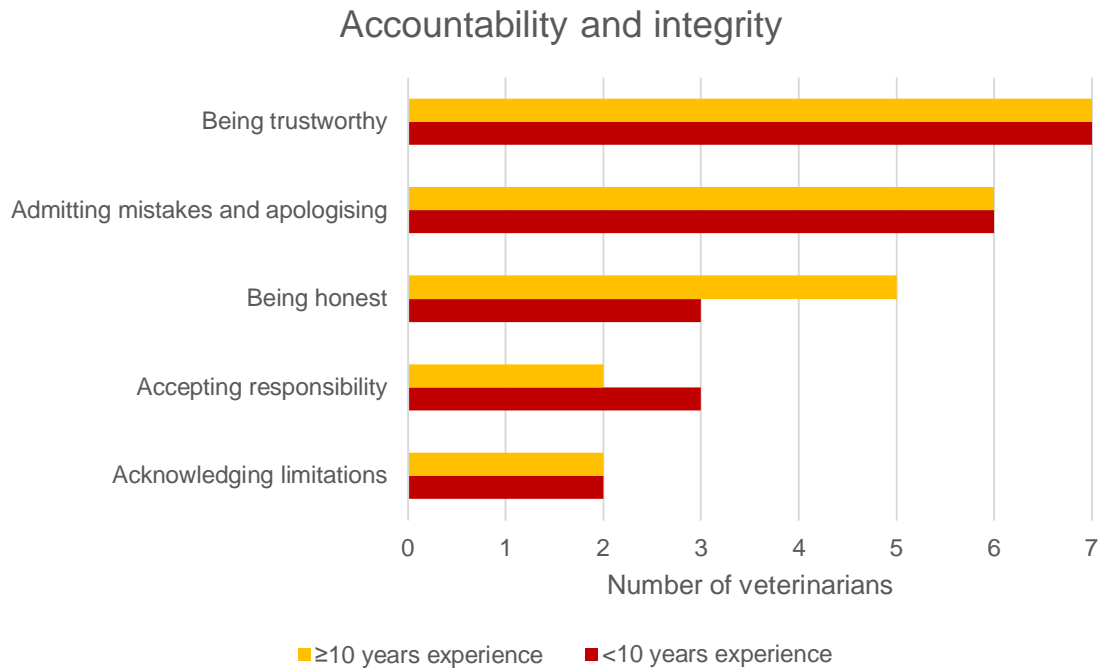




**Figure 6.B:** The five minor themes under 'Accountability and integrity' identified by both veterinarians with <10-years' experience and veterinarians with ≥10-years' experience.

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The number of veterinarians who referred to each minor theme during their positive and negative critical incident narratives is shown in Figure 6.C.



**Figure 6.C:** Number of veterinarians (N=22) who referred to each minor theme under 'Accountability and integrity' during their positive and negative critical incident narratives.

The five minor themes, with examples of supporting veterinarian comments, are described below:

#### **6.4.1.1. Being trustworthy**

This attribute was mentioned extensively by the participating veterinarians who described a good veterinarian-client relationship as one based on trust, e.g. *"...there was no trust between the client and me, they just didn't trust me right from the beginning. So that was a big problem and I don't really know how I could have established that trust"* (Veterinarian[V]5, ≥10-years' experience [y])

#### **6.4.1.2. Admitting mistakes and apologising**

Both experienced and less experienced veterinarians acknowledged that mistakes happen during clinical practice, and they emphasised the necessity to apologise to the client when they occurred. Two experienced veterinarians felt that the client respected the veterinarian more if the veterinarian admitted to making a mistake and did not try to cover it up, e.g. *"So, I think a lot of times*

*people just want you to tell them that you made a mistake and apologise...*" (V2, ≥10y), "*That really all [the client] wanted was acknowledgement that a mistake had been made*" (V3, ≥10y). One experienced veterinarian admitted that she had been reluctant to apologise during her early career because at that stage she had felt that making a mistake reflected badly on her clinical skills, e.g.

*...with a bit more experience I would actually go and apologise and say I'd messed up and I'm happier to do that now because I feel that it's just a mistake now, whereas back then I felt like it was a reflection on my veterinary skills* (V4, ≥10y).

### **6.4.1.3. Being honest**

Veterinarians described clients losing trust in them if the client felt that the veterinarian was not being open and truthful, e.g. "*I feel we are never quite honest or transparent about it [animal euthanasia] as we could or should be*" (V2, ≥10y). Honesty issues also arose when veterinarians were asked to engage in deceitful or illegal activities on behalf of the client. This frequently involved veterinary certification, when clients wanted the veterinarian to falsify certificates to allow their animals to be transported or to participate in a sporting event without the compulsory health requirements such as vaccinations, e.g.

*I just said to him look I'm not writing you a certificate...I'm not that kind of vet. And he turned around and he threw obscenities at me to the stage where I started to get a little concerned that he might thump me one* (V4, ≥10y).

One experienced veterinarian defined the full disclosure of patient information with the owner as a form of honesty, but described this as sometimes counter-productive when the client refused to listen, e.g. "*Like, it's really hard I think, to be honest when you know somebody doesn't want to hear the truth*" (V2, ≥10y).

#### **6.4.1.4. Accepting responsibility**

The message that emerged from the narratives of veterinarians with both <10-years' experience and ≥10-years' experience, was the necessity for veterinarians to assume responsibility for their own actions and those of their team. One experienced veterinarian lamented the fact that attempts at adopting a more collaborative approach with the client backfired, as the client wanted the veterinarian to assume full responsibility and wanted no part in the decision-making, e.g.

*I felt that I spent a lot of time with her but somehow along the track I just missed the point that she just wanted the vet to make a decision and almost tell her what was happening rather than me sort of trying to be more collaborative. (V1, ≥10y).*

#### **6.4.1.5. Acknowledging limitations**

Veterinarians from both levels of experience stressed the importance of recognising their limitations and admitting to the client if they did not know something or could not perform a particular procedure, e.g. "...I feel that admitting I don't know, is what keeps me from making a lot of extra mistakes" (V2, ≥10y), "With most, if I don't think I know something I will tell them that" (V3, <10y), "...and I think they kind of appreciated that I would try my best and I would ask if I need to" (V2, <10y). One experienced veterinarian even spoke of a situation in which she exposed herself to physical danger by not knowing when to call for collegial support, e.g.

*... I probably could not have failed more as a vet because I put my own self at such a risk. I should have called for support and it was knowing when to actually call for back up or when to draw the line about being uncomfortable in a situation. (V7, ≥10y).*

### 6.4.2. Communication skills

'Communication skills' (with clients and colleagues) emerged as another major theme (Figure 6.A). Many of the participating veterinarians spoke about the importance of communication skills at the beginning of the critical incident interview, before they had even started narrating their negative and positive critical incidents, e.g. "[Communication] is, in my experience, critically important especially for small animal vets" (V5, ≥10y).

One of the less experienced veterinarians expanded on this and emphasised the virtues of excellent communication skills for client satisfaction, personal wellbeing and job enjoyment, e.g. "*I think the better we get at communicating and learning how to communicate with clients effectively, but also with each other as colleagues, the better our mental health and workplace will be, and our job satisfaction will be*" (V5, <10y).

The importance of communication skills for minimising the risk of malpractice claims (as highlighted in Chapter 7) was emphasised by one of the experienced veterinarians, e.g. "*I also have to believe that good communication is what keeps [veterinarians] from getting in trouble with malpractice even when they should've gotten in trouble*" (V2, ≥10y). One experienced veterinarian and one less experienced veterinarian implied that good communication skills were more important for veterinary success than technical skills, e.g. "*So very much it was communication first before [technical] skill*" (V1, ≥10y), "*I have learnt that some of the best loved vets aren't actually necessarily the best clinicians in the world, but they have good communication skills with their client...*" (V5, <10y).

Thematic analysis of the critical incidents identified 12 minor themes that related to the major theme of 'Communication skills' (Figure 6.D). The number of veterinarians who referred to each minor theme during their positive and negative critical incident narratives is shown in Figure 6.E.



**Figure 6.D:** The twelve minor themes under 'Communication skills' identified by both veterinarians with <10-years' experience and veterinarians with ≥10-years' experience.

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### Communication skills



**Figure 6.E:** Number of veterinarians (N=22) who referred to each minor theme under 'Communication skills' during their positive and negative critical incident narratives.

The twelve minor themes of 'Communication skills', with examples of supporting veterinarian comments, are described below:

#### 6.4.2.1. *Building rapport with the client*

Unanimous agreement by participants on the importance of building rapport with the client became apparent. It was suggested that creating a harmonious working relationship with the client was best achieved through acknowledging the client's views and feelings. It was also proposed that relationship-building was enhanced by the veterinarian offering partnership and support to the client and avoiding being judgmental, e.g. *"But, just try, try your hardest to get that relationship going and make them trust you"* (V6, ≥10y), *"Taking a bit of time initially to talk to her, introduce myself and everything...yeah just to take that time and build a proper relationship from the get-go"* (V7, <10y).

Two of the less experienced veterinarians suggested that approaching the client in an open and friendly manner would help to build this rapport, e.g. *“I try and be really friendly and get them to talk and that and then I find that kind of brings them round a little bit”* (V2, <10y), *“I always try and get a few laughs in early”* (V4, <10y).

#### **6.4.2.2. Providing clear explanations to the client**

Offering clear expectations to clients was a theme that surfaced from the critical incident narratives. Clinicians needed to provide clinical information to the client in manageable, easily assimilated ‘chunks’. This was especially important if the information involved bad news. The importance of checking that the client had understood the information given was also alluded to by participants, e.g. *“I took a lot of time with her just to talk her through everything, and... what we were going to do, and how would we do it, and sort of reminisce about good times we'd had with the animal...”* (V7, <10y), *“I think I try harder to read people now and to offer them information in a way that they can accept and understand”* (V1, ≥10y).

Some of the younger veterinarians were experienced with the ‘chunk n’ check’ technique described by Silverman *et al.* (2013). This involves providing small chunks of clinical information to the client at a time and then checking that the client has understood the information using open-ended enquiry, e.g. *“And chunking and checking is a thing that I utilise a lot more now and I find it very valuable”* (V5, <10y).

#### **6.4.2.3. Showing the client courtesy and respect**

Many of the narratives highlighted the importance of building a relationship with the client based on courtesy and respect. While narrating negative critical incidents, two clinicians described encounters in which they lost their temper with the client, e.g. *“I was pretty short and rude when I said that”* (V3, ≥10y), *“...the only time where I actually turned around and swore at a client and I got really mad”* (V8, <10y). One veterinarian expressed remorse for such petulance, e.g. *“I think probably me saying it's like you want to make your dog sick is probably a fairly awful thing to say”* (V9, ≥10y).



#### **6.4.2.4. Displaying empathy towards the client**

The importance of demonstrating empathy towards the client became evident in the narratives of both cohorts of veterinarians. Nine veterinarians with  $\geq 10$ -years' experience acknowledged the importance of being kind, compassionate and empathetic towards the client (Figure 6.E), e.g. *"The main thing for me is just to be compassionate and kind and graceful"* (V1,  $\geq 10$ y). One of the newer veterinarians described themselves as possessing too much empathy and worried that this could potentially lead to compassion fatigue and burnout, e.g. *"And maybe probably I am a little bit the other way and am far too invested in my patients"* (V6 <10y).

#### **6.4.2.5. Displaying appropriate non-verbal behaviour**

The virtues of appropriate non-verbal behaviour to enhance the veterinarian-client relationship were extolled in the narratives of the veterinarians with  $\geq 10$ -years' experience, e.g. *"I actually had a better outcome than a lot of the cases I had because of using the non-verbal skills"* (V7,  $\geq 10$ y), *"...if I actively lower the volume of my voice, I can't get annoyed and it's really hard to get in one of those escalating arguments with someone if you're actively keeping your voice quiet"* (V3,  $\geq 10$ y).

#### **6.4.2.6. Demonstrating reflective listening**

More of the experienced veterinarians insisted that clients should be afforded the opportunity to tell their story without interruption compared to the less experienced veterinarians (Figure 6.E). The clinical practitioners described how important it was to listen to clients' stories attentively using verbal responses (e.g. using encouraging statements, repetition or paraphrasing) and non-verbal responses (e.g. by head nodding or maintaining eye contact), e.g. *"...you're not going to achieve anything until they feel listened to"* (V3,  $\geq 10$ y), *"...if people do not feel like they are listened to they get peeved pretty quickly"* (V7,  $\geq 10$ y).

#### **6.4.2.7. Accounting for the client's opinion**

Analysis of the participants' accounts of critical incidents revealed that veterinarians from both levels of experience acknowledged the importance of developing relationships with the client based on mutual respect and understanding. The necessity for clinicians to provide explanations and management plans that acknowledge the client's perspectives while avoiding the one-way transmission of information, were highlighted, e.g. "...*actually listening to the owner and acknowledging that his interpretation of that form was correct...is really all I had to do*" (V3,  $\geq 10y$ ), "...*the owner said to me that she really appreciated having someone that understood what she was talking about, listened to her when she said the horse was lame...*" (V6,  $< 10y$ ).

#### **6.4.2.8. Establishing mutually agreeable agendas with the client**

Negotiating an agenda with the client was recognised as important. Both the client's needs and the veterinarian's needs had to be considered when negotiating an agenda during a clinical consultation, e.g. "*You have a discussion and we talk about them and we explain, and we come to a mutual agreement*" (V2,  $\geq 10y$ ).

#### **6.4.2.9. Acknowledging the human-animal bond**

Some critical incident narratives illuminated the necessity for veterinarians to recognise and validate the strong bond that can exist between owners and their pets. By understanding the strength of this bond, veterinarians can behave appropriately when interacting with clients facing challenging situations, e.g. "...*she's attached to the cat...it's her family member now*" (V5,  $\geq 10y$ ), "*Their own pet...is like a child to them*" (V7,  $\geq 10y$ ).

#### **6.4.2.10. Engaging in good interpersonal communication with peers**

Veterinarians from both levels of experience regarded excellent communication amongst colleagues as a key factor in avoiding workplace conflicts. It was acknowledged that these conflicts could have a negative effect on workplace

satisfaction. One of the veterinarians with <10-years' experience equated good interpersonal skills with a safe working environment, improved mental health and increased job satisfaction, and felt that this would result in enhanced customer satisfaction, e.g.

*It is all about the communication as to how it comes off. I think the better we get at communicating and learning how to communicate with clients effectively, but also with each other as colleagues, the better our mental health and workplace will be, and our job satisfaction will be (V5, <10y).*

### **6.4.2.11. Keeping good medical records**

The need for good record-keeping only appeared in the narratives of two of the more experienced veterinarians. These veterinarians recognised that clients' perceptions of events in clinical practice do not necessarily match the reality of veterinarian-client interactions. One veterinarian spoke of the necessity to keep meticulous records to ensure that clinicians could defend themselves, in a factual and non-emotional manner, against allegations made retrospectively, e.g. "*Document, document, document, document, document, clinical records, they would be the bane of your life but document... if it is never documented it never happened*" (V7, ≥10y).

### **6.4.2.12. Getting client consent**

Critical incident narratives that included issues pertaining to client consent, highlighted how important this can be to the integrity of the veterinarian-client relationship. Getting and recording informed consent was regarded as vital to allow consent issues to be substantiated by the veterinarian if challenged at a later stage by the client. One veterinarian with ≥10-years' experience indicated this in the critical incident interview, e.g. "*And possibly we should get them signing something to say they understand these risks*" (V8, ≥10y).

### 6.4.3. Personal wellbeing

Five minor themes were identified that related to this major theme (Figure 6.F):



**Figure 6.F:** The five minor themes under ‘Personal wellbeing’ identified by both veterinarians with <10-years’ experience and veterinarians with ≥10-years’ experience.

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The number of veterinarians who referred to each minor theme during their positive and negative critical incident narratives is shown in Figure 6.G.



**Figure 6.G:** Number of veterinarians (N=22) who referred to each minor theme under ‘Personal wellbeing’ during their positive and negative critical incident narratives.

The five minor themes under ‘Personal wellbeing’, with examples of supporting veterinarian comments, are described below:

#### **6.4.3.1. Receiving collegial support**

The participants highlighted issues of personal wellbeing in their critical incident narratives (Figure 6.G). The importance of a supportive work environment was emphasised, with some recounting positive stories of support and others describing conflicts between them and work colleagues, e.g. *“I feel like I have a hell of a lot of support, we have processes in place...”* (V3, <10y), *“I did try and seek some sort of meeting between me and the other vet and the bosses so that we could work out a solution to this because I think it needs to be dealt with”* (V5, <10y).

Six of the veterinarians with ≥10-years’ experience also recognised, in their narratives, the importance of collegiality, and acknowledged the damage to a veterinarian’s self-esteem that could arise when collegial support was lacking, e.g. *“...put a support crew around you in stressful situations...you need to have a support crew around you”* (V7, ≥10y), *“It was inexperience and lack of support*

*looking back but at the time you know, I just thought that it was me not being a very good vet” (V4, ≥10y), “Sometimes you shouldn’t have to deal with it all by yourself, but actually other colleagues can definitely give you a lot of support and help...I didn’t get that so that is probably why it was so much more negative” (V5, ≥10y).*

One veterinarian admitted to becoming a better work colleague after making the effort to converse with colleagues and find out more about their lives and interests, e.g.

*...even with dealing with your colleagues, you just think right it is me and them and the cases and the animals and forget all about what is going on in their own lives... so amazing when you open up comms a bit, how that actually makes you a better colleague too to work with. (V7, ≥10y).*

#### **6.4.3.2. Enjoying self-confidence and self-esteem**

The veterinarians from both groups regarded these attributes as important. In reflecting on their critical incidents, many emphasised the importance of demonstrating confidence in order to gain the client’s respect and trust, e.g. “...it’s just knowing how to instill some confidence in the client, not necessarily that you always know what you’re doing but that you’re confident in the things that you do know what you’re doing...” (V9, ≥10y). Two experienced veterinarians described the self-esteem challenges faced by veterinarians when receiving negative client feedback, e.g. “I kept a book of all the thank you cards and the nice letters I got and when I’d have a complaint, I’d remind myself of the people that had actually thanked me” (V4, ≥10y), “What was most of consequence to me personally was what [the client] thought of me - his estimation of my ability - that was hard and was the biggest thing I had to swallow” (V10, ≥10y).

Narratives from two veterinarians, both with <10-years' experience, highlighted the sexist nature of some male clients (especially horse trainers) who had expressed little confidence in the abilities of female veterinarians, e.g. "...some people out there, certainly in the horse world... as a female I think you have to actually be really ballsy and almost be a bitch about it because otherwise you won't get any respect" (V8, <10y), and:

*So, there are so many things I can change, but I can't change the fact, unless I did some radical things, change the fact that I was born a female and that I don't have grey hair yet. So sometimes it does irritate me, especially when... it is usually from clients that you know you have done a really good job with and they have had really good experiences with you in the past and you think, why can't you see that I am actually doing a good job. And it is usually because they are comparing you to another [male] vet that they are used to (V5, <10y).*

### **6.4.3.3. Possessing resilience**

An equal number of veterinarians from each cohort reflected on the importance of resilience (Figure 6.G). These veterinarians, however, were alluding to resilience against abusive clients and not resilience as a mechanism for navigating the stresses, emotions, and competing demands of the normal veterinary workplace, e.g. "... it was just to be staunch and just take everything. I had to take everything this guy threw at me" (V10, ≥10y), "[The client] was 20 years my senior and just of an era where you just have to accept that that sort of abuse comes at you from time to time and you just have to harden up and cope with it" (V11, ≥10y), "...you just need to grow a pair of balls basically" (V5, <10y).

Furthermore, no mention was made about the measures that could be employed by practices to promote resilience through the creation of a positive workplace culture.

#### **6.4.3.4. Engaging in reflective practice**

The importance of reflective practice was alluded to by both cohorts of veterinarians, e.g. *“I was really pissed off at myself and really took that on my shoulders and I had to do a lot of thinking about it afterwards...”* (V3, ≥10y). One of the less experienced veterinarians confessed to the need to reflect more on cases although acknowledged that he had improved his reflective practice since graduation, e.g.

*I don't particularly always reflect on my own cases and how could I have done this better or worse...I've got time between calls to cool down, think and reflect to be fair, and I'm definitely doing that more and more say these last two years [of practice] than my first two years (V4, <10y).*

#### **6.4.3.5. Maintaining a good work-life balance**

Three of the veterinarians with ≥10-years' experience acknowledged the importance of this attribute, e.g. *“...I let it go when I go home, and I don't take it home with me and don't lose sleep over it”* (V4, ≥10y), *“...we are so devoted to that profession we often forget... you know the other dimensions of our life...”* (V7, ≥10y). One experienced veterinarian acknowledged that the newer graduates seemed better at maintaining a work-life balance than the older generation, e.g. *“The new people coming through now are quite rightly more demanding of work-life balance and not being put upon to go the extra mile for every single day for 14-hour days and that...is ridiculous and is professionally unsafe”* (V11, ≥10y).



#### 6.4.4. Quality of care

The fourth dominant theme was 'Quality of care'. This usually revolved around client expectations, with one experienced veterinarian describing the exacting demands of one client, e.g.

*...he said that he came here because of good service and that he doesn't tolerate bad service in any way and that we better be on our toes because the second that we don't give him good service he's gone (V1, ≥10y).*

Four minor themes were identified (Figure 6.H). The number of veterinarians who referred to each minor theme during their positive and negative critical incident narratives is shown in Figure 6.I.



**Figure 6.H:** The four minor themes under 'Quality of care' identified by both veterinarians with <10-years' experience and veterinarians with ≥10-years' experience.

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**Figure 6.I:** Number of veterinarians (N=22) who referred to each minor theme under 'Quality of care' during their positive and negative critical incident narratives.

The four minor themes under 'Quality of care', with examples of supporting veterinarian comments, are described below.

#### **6.4.4.1. Technical competency**

Although technical competency was mentioned regularly during the positive and negative critical incidents, further probing usually revealed that underlying failures of professional behaviour had exacerbated the situation. The newer veterinarians complained that conflict often developed when the client did not have sufficient confidence in the veterinarian's technical abilities, e.g.

*'Are you sure you're able to do this, I don't think you can do this... like what are you doing, why are you doing it that way? Hurry up, why are you taking so long'? Just constant remarks in my ears (V8, <10y).*

#### **6.4.4.2. Staffing levels**

Three veterinarians with ≥10-years' experience raised this issue (Figure 6.I). All three veterinarians complained that a lack of staffing or inadequate equipment contributed to negative critical incidents. To clients, staffing levels were seen as

a reflection of the level of veterinary care, e.g. *“First mistake I made, I didn’t take a nurse or a professional for holding veins. Always do that, always, always, always do that - so you don’t go by yourself relying on the client to hold an animal”* (V6, ≥10y).

### **6.4.4.3. Empathy and care shown towards the patient**

One of the veterinarians with <10-years’ experience referred to this and described how a client thought that the veterinarian’s level of care and commitment to the animal’s welfare was inadequate, e.g. *“And she was very angry at the way I’d handled that, and she felt that I hadn’t, hadn’t cared for her dog”* (V10, <10y).

### **6.4.4.4. Time management**

One of the less experienced veterinarians alluded to this attribute of professionalism and described how an exemplary work ethic had contributed towards a positive interaction with the client, e.g. *“I think I have quite a good work ethic in terms of making sure I’m doing jobs in a timely fashion, so I’m not mucking around or turning up late or anything like that”* (V11, <10y).

## **6.5. Discussion**

This study represents the first time the CIT has been used to report qualitative research on veterinary professionalism. From a phenomenological perspective, the CIT represented a naturalistic tool that analysed participants’ narratives in an aspect of their work activity or clinical experience (Silva *et al.* 2016). The CIT methodology allowed the identification of events representing distinctive phenomena, from the participants’ perspectives, about clinical incidents. This was particularly true when the incidents were indicators of either success or failure (Redmann *et al.* 2000). The CIT allowed participants to report their most memorable and relevant experiences without feeling the need to adhere to prescribed structures or outlines (Reyes 2018). Furthermore, this technique allowed the participants to discuss a very broad range of situations without detailed prompting (Gremier 2004). This methodology, therefore, proved to be appropriate for in-depth exploration of veterinary professionalism in the

workplace. The CIT facilitated the exploration of the underlying factors involved in a situation, rather than simply seeking participants' opinions, since it was based on a detailed recall of specific events (Oxtoby *et al.* 2015).

Through TA of the critical incident narratives, the veterinarian-client relationship, underpinned by trust, emerged as the overarching theme. Previous research has also underscored the importance of this relationship to career satisfaction and success. Bristol (2002) found that 30% of veterinary graduates from North Carolina State University regarded working with clients and building relationships as the most satisfying aspects of being a veterinarian. Grand *et al.* (2013) and McDermott (2018) reported that visits to a veterinarian by clients declined in proportion to the erosion in trust between the client and the veterinarian. Techniques to assist trust-building, suggested by McDermott (2018), include the veterinarian getting to know and showing an interest in clients' personal lives and sharing personal experiences with the client.

Under the accountability and integrity theme, the narratives highlighted the importance of acknowledging one's limitations when practising veterinary medicine. Mossop (2012a) reported that the way uncertainty and limitations are disclosed by the veterinarian to the client is correlated with client satisfaction levels during a consultation. This aligned with the viewpoints of Miller *et al.* (2004) and Torres *et al.* (2019) who characterised qualities such as acknowledging limitations and knowing when to seek a second opinion as essential for new veterinary graduates and small animal practitioners respectively. Furthermore, the studies of Rhind *et al.* (2011) and Schull *et al.* (2012) revealed that veterinarians ranked the awareness of one's limitations as critically important, rating it as more important than accepting criticism, self-reflection and self-audit.

Honesty was also included as an essential attribute under the theme of accountability and integrity. An employability report, published by Cake *et al.* (2019), disclosed that clients and veterinary employers had no expectations for veterinarians to be experts in all veterinary knowledge or technical skills. Instead, they valued honesty and respected veterinarians who admitted gaps in their

knowledge and skills with a promise to rectify this through a process of continual learning and development.

The critical incidents discussed by participants demonstrated effective communication skills, with both clients and colleagues, as key to successful clinical practice. The ability to communicate effectively represents an essential skill for clinical practitioners who need to be able to both transmit and receive accurate information with clients and colleagues. This aligned with the findings from a study conducted by Torres *et al.* (2019) in which small animal practitioners rated communication skills as 'very important'. Breakdowns in communication have been described by clients as occurring when they feel as if they have been misinformed or given insufficient opportunity to exercise choice (McDermott 2018). Clients in a study conducted by Coe *et al.* (2008) reported that breakdowns in communication with the veterinarian decreased their level of satisfaction with the veterinary care received. Communication underpins empathy, trustworthiness and relationship-centred care (Cake *et al.* 2018) and leads to increased satisfaction of both clients and veterinarians and to improved patient welfare (Adams and Kurtz 2006).

The necessity for clients to be allowed to participate in decision-making also appeared in participants' accounts. Some narratives showed the importance of negotiating an agenda with the client that took both the client's and the veterinarian's needs into account. Discussion centred on the need for veterinarians to share their thoughts with clients and to explain to them the rationale for conducting various procedures during the consultation. In this way, the client would be able to understand and become involved in the decision-making process. Shaw *et al.* (2012) demonstrated that clients showed engagement and empowerment when their veterinarian adopted a stance of partnership in the approach to the care of their animal. This position was supported by Radford *et al.* (2006) who recommended that the veterinarian should always offer choices to the client rather than giving directives. It is vital that veterinarians make an effort to understand their clients' perspectives in order to communicate clearly and to improve the chances of successful patient treatment (Coe *et al.* 2008). Cake *et al.* (2019) reported that both clients and

veterinarians believed that collaborative decision-making and establishing mutually agreeable agendas nurtured good veterinary-client relationships and trustworthiness.

The participating veterinarians also discussed the value of affording the client courtesy and respect. Building a relationship with the client based on mutual respect and understanding was identified as essential. In support of this viewpoint, Hughes *et al.* (2018) reported that clients asked for the veterinarian to respect them and trust their judgement. To foster harmonious relationships, veterinarians need to provide the client with explanations and management plans that relate to the client's perspective. During this conversation, it was recommended that veterinarians avoid excessive use of technical jargon to prevent confusing or overwhelming the client (Adams and Kurtz 2006). Instead, veterinarians should solicit the client's concerns, thoughts and feelings about the information by allowing them to ask questions, seek clarification or express doubts (Radford *et al.* 2006).

Displays of empathy towards both the client and the patient were identified from the narratives as important veterinary professionalism attributes. Radford *et al.* (2006) and McDermott (2018) asserted that empathy towards the client should be used to communicate understanding and appreciation of the client's feelings or predicament. By showing empathy towards the client, veterinarians would be able to see the patient from the client's perspective. Empathy has helped to promote satisfaction of both the client and the veterinarian by building a positive working environment (Radford *et al.* 2006). Furthermore, empathy has been described as the foundation of effective communication and trustworthiness (Cake *et al.* 2019). Clients want the veterinarian to express empathy statements and provide empathetic nonverbal cues towards them during veterinary appointments (McArthur and Fitzgerald 2013). It was additionally deemed important by participants that veterinarians should recognise the client's verbal and non-verbal cues for signs of concern, confusion or information overload (Radford *et al.* 2006; Cake *et al.* 2019). However, in a study conducted by Tinga *et al.* (2001), 30% of recent veterinary graduates reported lacking confidence about interpreting peoples' nonverbal behaviour.

The importance of veterinarians acknowledging and validating the human-animal bond that exists between owners and their pets was highlighted in this study. The importance of understanding and supporting the attachment between the client and the animal was underscored by Timmins (2008) who found the bond to have a significant impact on the physical and emotional wellbeing of animal owners. Many clients have now started to expect that their veterinarian should function like a paediatrician for a child rather than a veterinarian for an animal (Hess-Holden 2017). Veterinarians who validated the human-animal bond were, therefore, reported to be more able to fulfill their obligations to the wellbeing of both the patient and the client (Timmins 2008).

Veterinary wellbeing emerged as another theme. Collaboration and collegial support enhance personal wellbeing and were recognised as vital components of veterinary practice due to the inter-professional nature of veterinary healthcare teams (Heath and Mills 2000; Danielson *et al.* 2012; Cake *et al.* 2016; 2019). The benefits of this collaborative relationship include improved staff satisfaction, motivation and productivity (Cake *et al.* 2019). In addition, enjoying a good work life balance was also highlighted as essential for optimal wellbeing. The veterinary profession has been recognised as intensive and stressful, with veterinarians commonly juggling long working hours with unpredictable schedules (Hess-Holden 2017; Moir and Van den Brink 2020). Some veterinarians in private practice have reported working weeks in excess of 100 hours (Phillips-Miller *et al.* 2000). This makes it difficult to achieve an acceptable work-life balance and maintain family relationships. Veterinarians have cited the number of hours worked as one of the greatest workplace stressors (Bartram *et al.* 2009).

Coping with the volume of work expected and managing time effectively remains a challenging aspect of the veterinary profession (Riggs *et al.* 2001). Under the quality of care theme, time management was identified as an essential component. Poor time management could contribute to prolonged work hours and poor work-life balance (Cake *et al.* 2018). In a study conducted by Tinga *et al.* (2001), 17% of recent veterinary graduates reported feeling uncomfortable about setting time limits for clients while also providing a quality service.

Participants underscored the necessity for veterinarians to manage their time efficiently. This included being punctual for work commitments. Cake *et al.* (2019) advised, however, that while clients appreciated punctuality and time efficiency, they did not like to feel rushed during consultations.

### **6.6. Summary**

The goal of the CIT was to assist participants to recall from memory and describe, in a clear and detailed way, specific incidents. In this way, the use of CIT allowed the capture of the opinions of veterinarians on important veterinary professionalism attributes and opened a dialogue for clinical practitioners to reflect upon their experiences with clients. The analysis of these critical incident narratives revealed that relationship-centred veterinary care, based on a collaborative veterinarian-client partnership, has now become mandatory for effective veterinary practice. Relationship-centred care revolves around a mutual understanding between the veterinarian and the client and a recognition of the client's perspectives and expertise through shared negotiations. It represents a joint venture between the veterinarian and client to provide optimal care for the animal (Shaw *et al.* 2012; McDermott 2018).





## **7. Clients' perspectives on essential veterinary professionalism attributes for practising clinical veterinarians, determined through the analysis of veterinary complaints lodged by clients with the Veterinary Council of New Zealand against veterinarians**

### **7.1. Overview**

This chapter addresses the fifth research question; namely, what are client perceptions, based on the nature of veterinary complaints lodged by clients with the Veterinary Council of New Zealand (VCNZ) against veterinarians, on important veterinary professionalism attributes for veterinary clinical practitioners.

This question was addressed through a mixed method study using client notifications and complaints received by the VCNZ. Since the use of notifications and complaints to determine essential veterinary professionalism attributes has not been widely reported in veterinary educational literature, the Methods section outlines how the notifications and complaints were categorised and analysed and how thematic analysis (TA) was used to determine the underlying reasons for the complaints.

The Results provide a descriptive analysis of all notifications and complaints received by the VCNZ during 1992-2016 and describes the major and minor themes related to professionalism that emerged from TA of notifications and complaints lodged during 2013-2015. The chapter represents the first time that reasons for client notifications and complaints against veterinarians in New Zealand have been analysed and reported. The findings could help justify the inclusion of specific veterinary professionalism topics within a primary veterinary qualification with the goal of reducing the number of complaints laid against veterinarians, based on breaches of professional conduct.

This chapter has been published as a paper in a peer-reviewed publication (**Gordon SJG, Gardner DH, Weston JF, Bolwell CF, Benschop J and Parkinson TJ**. Quantitative and thematic analysis of complaints by clients against clinical veterinary practitioners in New Zealand. *New Zealand Veterinary Journal* 67(3), 117-125, <https://doi.org/10.1080/00480169.2019.1585300>, 2019) and has been reproduced below:

### 7.2. Introduction

Professionalism in health sciences is a complex concept encompassing various attitudes, values and behaviours (Swick *et al.* 1999). Four key attributes of professionalism have been described, namely, putting the interests of the clients/patients before one's own; maintaining high ethical and moral standards; responding appropriately to societal needs and adhering to core humanistic values of altruism, honesty, integrity and empathy (Swick *et al.* 1999). In addition, Arnold (2002) identified accountability, excellence, sense of duty and advocacy as important traits of professionalism. Such lists of professional attributes are widely accepted, although not universally. For example, Eraut (2000) considered such lists to be culturally constrained and therefore of limited value in defining core characteristics of professionalism.

Early attempts to define professional behaviour amongst veterinarians in the United States of America focused heavily upon business practices (Brown and Silverman 1999; Cron *et al.* 2000b). Thus, such studies focused on how the profession could survive the prevailing economic challenges and increase its revenue base. However, they largely failed to consider the values and beliefs that the veterinarian should possess, or to acknowledge the profession's social contract. More recent work (e.g. Mossop 2012b) has identified that professional attributes such as integrity, innovation, emotional intelligence, leadership and motivation need to be emphasised, so the profession can better serve society and not just achieve financial success.

In human medicine, patients place great importance on the physician-patient relationship (Jha *et al.* 2015). Veterinarians also share a significant relationship

of trust with their clients as they are privy to clients' confidential emotional and economic information (Mossop 2012b). Clients are therefore important stakeholders within the veterinary profession and their opinions about what constitutes veterinary professionalism need to be acknowledged. There is however limited research available about clients' perspectives of veterinary professionalism. In a recent study, Hughes *et al.* (2018) found that clients in Australia and the United Kingdom valued veterinarians who displayed quality veterinary care, were compassionate, open and honest and provided clear explanations while inspiring confidence in their skills and knowledge. The clients demanded from their veterinarian, a balance between competence, professionalism and humanity (Hughes *et al.* 2018). Likewise, Mellanby *et al.* (2011) reported that a large proportion of clients in the United Kingdom considered confidence, patience, ability to work in a team, honesty, politeness and decisiveness as important attributes of a good veterinarian. The views of clients about the desirable attributes of veterinary technologists were also solicited in a survey conducted in four Australian veterinary practices. As with veterinarians, the majority of clients viewed emotional intelligence and professional attributes as being of importance in the clinical practice of veterinary technology staff (Clarke *et al.* 2015).

Section 88 of New Zealand's Veterinarians Act (Veterinarians Act 2005) sets minimum standards for practising as a veterinarian while promoting high standards of professional conduct. The VCNZ Code of Professional Conduct (CPC) prescribes the professional conduct standards the VCNZ expects veterinarians to meet and to be measured against (CPC 2017). These standards include acting in a manner that promotes effective communication, honesty, trust, confidentiality and respect with both clients and colleagues. One source of information about clients' perspectives on veterinary professional practice is the data contained in complaints lodged with professional regulators. Clients may notify the VCNZ of concerns about a veterinarian or they may lodge a formal complaint. Since 2013, if a client makes a notification, the VCNZ will refer the concern to a notification review group (NRG). The NRG serves as a triaging panel to review the information presented and decide whether the notification should be escalated to a complaint. If the NRG considers that the matter needs

investigation, section 39 of New Zealand's Veterinarians Act (Veterinarians Act 2005) states that the VCNZ may then refer this to a complaints assessment committee (CAC). If the client were to lodge a formal complaint, this would be referred directly to a CAC for investigation. Prior to 2013, both notifications and complaints were referred by the VCNZ directly to a CAC for investigation. The CAC must investigate the matter under section 40 of the Act (Veterinarians Act 2005). In determining whether sanction is warranted, the CAC objectively considers whether the veterinarian's conduct has brought discredit to the profession.

In contrast to medicine profession regulatory research, there is a scarcity of literature on complaints and disciplinary measures brought against veterinarians and risk factors for veterinarians to receive a complaint. In a study of disciplinary measures brought against medical practitioners in New Zealand, Elkin *et al.* (2011) found that complaints were laid against medical practitioners for issues of sexual misconduct (24% of cases), illegal or unethical prescribing of medicines (21%) and inappropriate medical care (20%). Male doctors were identified as more at risk of facing disciplinary tribunals, accounting for 91% of the tribunal cases (Elkin *et al.* 2011). These findings agree with those of Cunningham *et al.* (2003) who surveyed 971 doctors registered in New Zealand and reported that male practitioners accounted for 77.6% of medical complaints received. In addition, 44% of the complaints were against doctors who had been in practice for >20 years and 68% of complaints were against doctors who were 40-60 years-old (Cunningham *et al.* 2003). Elkin *et al.* (2011) found that medical practitioners had gained their medical qualifications an average of 21.4 years before facing disciplinary charges.

In the United States of America, the majority of complaints against veterinarians were associated with communication deficiencies (Kinnison *et al.* 2015). Those authors reported that when errors occurred, attention was focused on deficiencies in clinical knowledge and decision-making. Most errors, however, were found to be procedural and related more to failure to communicate and to apply best practice (Kinnison *et al.* 2015).

The aims of the current study were to provide a descriptive analysis of all notifications and complaints received by the VCNZ during 1992-2016 and to use a TA of notifications and complaints made by clients to the VCNZ during 2013-2015 to determine the underlying reasons for their complaints. This would allow the investigation of whether perceived breaches of veterinary professional skills predominated over technical competency issues as well as the veterinary professional attributes that clients perceive as having failed when they make a complaint. The intention was that the findings of this study could form the basis for developing future appropriate professional development training for veterinarians.

### **7.3. Methods**

Details of all notifications and complaints, lodged by clients and veterinary staff against veterinarians from 1992-2016 was provided by the VCNZ. Access was given after a confidentiality and privacy agreement was signed, and approval for the study was obtained from the Massey University Human Ethics Committee (MUHEC Low Risk Notification: 4000016302).

#### **7.3.1. Descriptive analysis of complaints data**

A descriptive analysis of all notifications and complaints, lodged by clients and veterinary staff against veterinarians from 1992-2016 was undertaken (N=1218). Data for each notification or complaint included the gender of the veterinarian, the type of veterinary practice (companion animal, large animal/production animal or other species) and the number of years the veterinarian had been registered with the VCNZ. In addition, 959 of the complaints had been coded according to the existing VCNZ coding system. These categories were unprofessional behaviour, inappropriate behaviour, restricted veterinary medicines, prescription animal remedies, unsatisfactory treatment and fees charged.

Complaints categorised as unprofessional behaviour and inappropriate behaviour were grouped into a common category called unprofessional veterinary behaviour. The restricted veterinary medicines and prescription animal remedies were categorised together into conflicts involving veterinary medicine.

Unsatisfactory treatment was re-labelled as unsatisfactory treatment and care, and fees charged was re-labelled as conflicts over charging. These data also contained information on the outcome of each case, categorised as did not proceed (did not merit further investigation), withdrawn, unfounded (no further action was required), unfounded with cause (no formal censure was required but recommendations were made), judicial (referred for judicial review), competence (case upheld due to technical competency concerns), diversion (a suspended sentence) and health.

The data were summarised based on the revised complaint categories and outcome of each case, and were also categorised by the gender of the veterinary respondent, the type of veterinary practice, and the number of years the respondent had been registered with the VCNZ at the time of the complaint (categorised as  $\leq 1$ , 2-10, 11-20 and  $\geq 21$  years).

### **7.3.2. Thematic analysis of complaints data**

Further analysis was conducted on a subset of the data to identify the themes underlying the nature of complaints raised against veterinarians in more detail. This involved an in-depth qualitative analysis, using TA of 141 notifications and complaints lodged with the VCNZ in 2013, 2014 and 2015. As the focus of the study was to identify clients' perceptions of veterinarians, complaints lodged by one veterinarian against another ( $n=25$ ) were excluded. Data were extracted from the original VCNZ notification forms completed by clients, as well as any supporting letters or e-mail correspondence, the veterinarians' responses and the NRG or CAC final reports.

Thematic analysis was used to identify patterns of meaning within the data and followed a six-step process as described by Braun and Clarke (2006; 2014). Each complaint was first read carefully, and key points noted. Then the features of the data that appeared meaningful were identified, based on an inductive process of allocating codes to recurring patterns within the data. This involved working with the data to find units of information that came directly from the complainants' statements and the respondents' rebuttals. All coded data were then checked for

salient trends or patterns. Any relationships between the coded data were considered and gradually the coded data were linked and collated into minor and major themes when the codes seemed to relate to the same or similar content. As common ideas and concepts emerged subthemes were combined into higher-level themes. Following this, three of the authors (SJGG, DHG and JFW) reviewed the minor and major themes. Each theme was reviewed against the coded data and then all these themes were examined in relation to the overall data set and to each other. Related or overlapping minor themes were combined; separate minor themes and major themes were specified; and poorly represented or ambiguous minor themes were re-specified or discarded. Each minor theme and major theme was then named and given a clear working definition. The overall theme structure, and excerpts which specified or clarified each minor theme and major theme, were identified and collated into a report.

This in-depth TA was undertaken, as it was apparent that often a notification or complaint involved more than one issue and that competency issues were usually only raised within the context of other professional concerns. Using TA, one notification or complaint could generate multiple codes that were then combined into higher-level themes.

### **7.4. Results**

#### **7.4.1. Descriptive analysis of complaints data**

Of the 1,218 notifications or complaints referred to the VCNZ between 1992 and 2016, 227 (18.6%) cases were determined by the VCNZ to not merit further investigation. A further 20 (1.6%) cases were dismissed by the VCNZ due to insufficient information provided by the complainant. Two of the cases were resolved by mediation between the two parties without further investigation and 10 (0.8%) were subsequently withdrawn by the complainant. The investigatory committees ruled in 559 (45.9%) cases that no further action was required against the respondents. In 289 (22.7%) of the cases, the committees decided that no formal censure was required but recommendations were made for the respondents to undertake remedial measures. Of the remaining cases, 55 (4.5%) charges were laid with respondents adjudicated by a judicial or disciplinary



committee, 18 (1.5%) cases were upheld due to technical competency concerns, but without a judicial review, and in 12 (1.0%) of the cases a suspended sentence was recommended for the respondents. The health of the respondents in 10 (0.8%) of the cases were questioned and their cases were referred to a health committee for further assessment. Sixteen (1.5%) of the cases were incomplete at the time of data analysis with no outcome yet determined. As NRG were only formed in 2013, it was not possible to determine how many cases handled by a NRG were subsequently referred to a CAC during the 25-year study period. Between 2013 and 2016, 101 cases were referred by the VCNZ to a NRG and of these, 27 (26.7%) were referred to a CAC for further investigation.

Of the 1,218 notifications or complaints referred between 1992 and 2016, 959 had been formally categorised by the VCNZ based on the nature of the complaint. Of these, 595 (62.0%) were categorised as technical competency concerns, while 308 (32.1%) were categorised as perceived unprofessional behaviour. The animal species that was the object of the complaint was identified in 738 cases. Of these, 623 (84.4%) complaints involved companion animal cases and 104 (14.1%) involved large animal, including equine, cases. Between 2009 and 2016, 33-40% of full-time equivalent (FTE) practising veterinarians in New Zealand were working predominantly with companion animals (VCNZ 2015; 2016). The gender of the respondents was recorded in all 1,218 complaints laid during this period; 855 (70.2%) involved male veterinarians and the remainder female veterinarians. Between 2008 and 2014, 53-58% of the FTE practising veterinarians were male (VCNZ 2015; 2016).

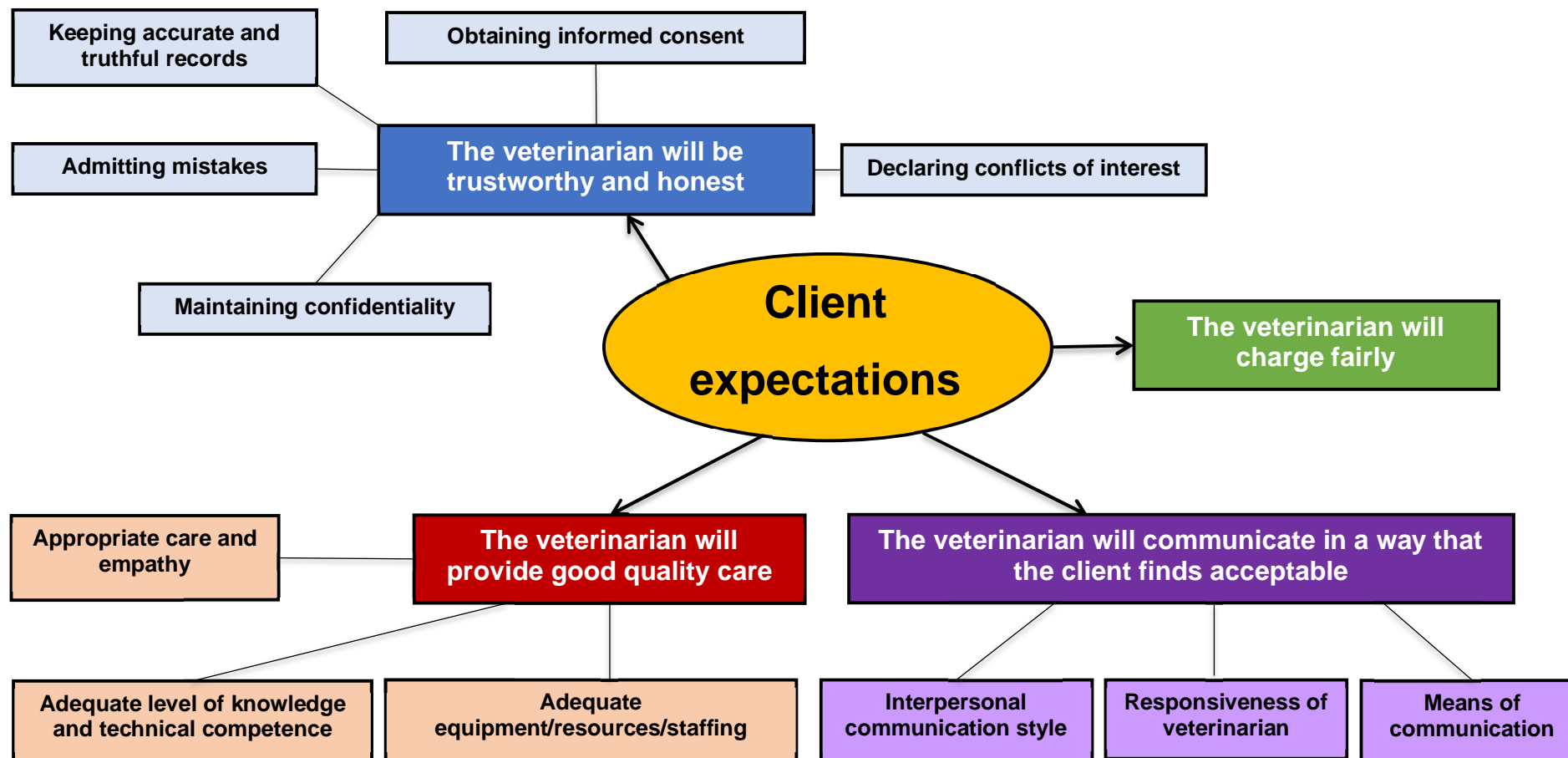
The number of years since the respondents had graduated was recorded for 1,121 of the complaints laid during this period. Of these, 36 (3.2%) involved veterinarians who had been registered for  $\leq 1$  year, 256 (22.8%) for 2-10 years, 341 (30.4%) for 11-20 years and 488 (43.5%) for  $\geq 21$  years at the time of the complaint.

### 7.4.2. Thematic analysis of complaints data

Client expectations was the one overarching theme, under which were nested four major themes; a veterinarian would be trustworthy and honest, provide good quality care, communicate in a way that the client finds acceptable, and charge fairly. Minor themes were identified that related to each major theme, as illustrated in Figure 7.A. These major themes, with examples of supporting client comments, are described below.

#### 7.4.2.1. *The veterinarian is expected to be trustworthy and honest*

Five minor themes were identified under this theme (Figure 7.A). While it was not always clear from the complaints documents whether consent had actually been sought, clients expressed concern when they felt that treatment had been undertaken by the veterinarian without their consent, e.g. “[The veterinarian] *authorised my cat’s cremation without my permission*”. Complaints about record keeping were linked to concerns about veterinarians’ truthfulness or recall e.g. “*It seems to me that they are concocting a story*”, “*I want to see the report and medical records myself*”. Clients also raised complaints when they felt that veterinarians had made serious errors that had been concealed, e.g. “*This severe mishap was deliberately hidden from us*”, “[The veterinarian] *never planned to tell me*”, “*Nothing was disclosed...until we inquired*”.



**Figure 7.A:** The four major themes under the overarching theme of ‘Client expectations’ identified through thematic analysis of notifications and complaints made by clients to the Veterinary Council of New Zealand during 2013-2015.

Client confidentiality was regarded as important, with one owner alleging that the health of a pet had been discussed by the veterinarian with a third party without the owner's permission. Client complaints also raised concerns around conflicts of interest, with doubts expressed over whether the veterinarian was acting impartially or in the best interests of the client or animal. Pre-purchase veterinary checks on horses provided a good example of this, with a potential buyer (who had contracted the veterinarian for the pre-purchase check) having felt that the veterinarian was working for the best interests of the vendor, e.g. "[The veterinarian's actions were] *fraudulent, opportunistic and self-serving conflicts of interest*".

### **7.4.2.2. The veterinarian is expected to provide good quality care**

This major theme included three minor themes (Figure 7.A). Showing care and empathy included providing adequate comfort and analgesia to the patient, as well as demonstrating empathy to the client, e.g. "[The veterinary practice] *did not seem to care about my cat*", "[The veterinarian] *made my cat cry*", "*I wish I had been left alone with my pet to say goodbye*", "*No one rang to see how I was*".

Veterinarians also needed to display levels of knowledge and technical competence acceptable to the client, e.g. "*My mother knows more than the vet*", "*I know what the vet should have done*".

Clients viewed the amount and state of equipment as reflecting on the veterinarian's competence, resources and ability to provide suitable care, e.g. "*How can you put a 38 kg dog on a small desk?*". Staffing levels were also seen as reflecting levels of care, and clients wanted to be clear about who held which roles in the practice, e.g. "*I did not know who that person was and where they fitted in*". In addition, clients regarded the provision of an adequate after-hours service to be important with many complaints involving perceived deficiencies in after-hours staffing and resources, e.g. "*My pet was left alone for two nights*".

**7.4.2.3. *The veterinarian is expected to communicate in a way that the client finds acceptable***

Communication was an important issue for clients, with three minor themes recognised (Figure 7.A). In relation to interpersonal communication, clients expected the veterinarian would remain polite and respectful at all times, e.g. “[The veterinarian] *laughed at me*”. Clients also expected the veterinarian to avoid sarcasm, avoid patronising the client and use plain/non-technical language, e.g. “*Why can’t they just simply explain what has happened?*”.

Furthermore, it was felt important that the veterinarian always checked the client’s understanding of information offered and included the client in decision-making, e.g. “[The veterinarian] *did not discuss what that meant*”, “*I felt left out of the whole process*”. In one situation, a client confused the veterinarian’s mention of anaesthesia with euthanasia with nearly fatal consequences for the pet. Other problems arose when veterinarians appeared to make assumptions about clients’ ability to afford treatment or to understand information, and to limit the explanations and range of options offered. Complaints also arose when a veterinarian was from a cultural background that is foreign to New Zealand. In these cases, the communication issues were reported to revolve around client difficulties in understanding a veterinarian’s accent.

The means of communication was as important as communication style, especially when veterinarians would not meet the client face-to-face and hid behind other staff or email correspondence when, in the client’s view, things were going wrong.

Veterinarians were expected to be responsive to client's informational and emotional needs, by keeping clients updated about possible complications or increasing costs, responding promptly to client queries or complaints, keeping in regular contact, providing frequent updates, and managing client expectations around patient health, e.g. *"I did not know what was going on"*, *"No discussion was had about whether my pet was actually dying"*, *"[The veterinarian] never responded to my letter"*, *"Still have not received the vet's report"*, *"[The veterinarian] never returned my repeated calls"*.

#### **7.4.2.4. The veterinarian is expected to charge fairly**

Client complaints about fees did not appear in isolation, but in the context of concerns about veterinary technical competence, interpersonal skills (e.g. rudeness, neglect), quality of care, or unexpected negative outcomes. Given the contextual information that was usually provided, there did not seem to be many instances of clients raising spurious complaints in order to seek a refund; rather a complaint and request for fees to be refunded appeared in the context of other concerns, e.g. *"We paid thousands... and the service was not acceptable"*, *"Why should I pay for neglect?"*.

### **7.5. Discussion**

Of the 1,218 notifications or complaints referred to the VCNZ between 1992 and 2016, 818 (67.2%) were not investigated by the VCNZ or were dismissed with no further action recommended. This implied that many complaints were laid based on clients' subjective perceptions of events and not necessarily on the reality of the veterinarian-client interactions. This highlights the importance of maintaining meticulous medical records, as accurate written accounts of events could allow veterinarians to defend themselves more easily against a complaint in a factual and non-emotional manner. Furthermore, obtaining written consent over verbal

consent could allow consent issues to be substantiated by the veterinarian if challenged later.

Only 18 (1.5%) complaints were upheld due to technical competency concerns during this 25-year study period. Furthermore, of the 55 cases where charges were laid with respondents adjudicated by a judicial or disciplinary committee, only 16 were directly related to technical competency concerns, despite 62% of the complaints being officially categorised by the VCNZ as technical competency concerns based on the nature of the original complaint laid. The TA component of this study reinforced this finding inasmuch as few of the complaints analysed in detail involved a veterinarian making an obvious technical mistake. There was far more focus on standards of service, quality of care, integrity and trustworthiness, and interpersonal interactions. This reflects data from elsewhere, for example, 352/817 (43.1%) complaints lodged with the Royal College of Veterinary Surgeons (RCVS) in 2014, were due to alleged inadequate care and service (RCVS 2014). However inadequate care, in the form of intentional neglect, was only cited as the cause of error in two out of 225 claims made to the leading indemnity insurer in the United Kingdom (Oxtoby *et al.* 2015).

Analysis of these data brought to light some limitations in the existing VCNZ complaints classification system. The main interpretive frame appeared to revolve around the level of veterinarians' technical competency, given that 62% of notifications or complaints were initially categorised by the VCNZ as competency concerns. The technical details of a case are usually recorded so technical competency issues can be easily assessed. The investigative process normally unearthed issues of poor professionalism, but complaints based on poor service, lack of respect, lack of empathy, integrity and trustworthiness are harder to address as there are often no independent witnesses or corroborating evidence. Similarly, previous research into medical practitioners disciplined for professional misconduct in New Zealand and Australia reported serious limitations in the existing medical complaints typologies, including the provision of insufficient categories, and the conflation of the types of misconduct with the underlying reasons for the misconduct (Elkin *et al.* 2011). The VCNZ complaints classification system needs to provide enough detail to be able to code, classify

and track complaints over time, as well as to recommend appropriate training to address skills deficits in veterinarians that result in complaints.

Where recorded, 84% of notifications or complaints involved companion animal cases, whereas between 2009 and 2016 only 33-40% of FTE practising veterinarians in New Zealand were working predominantly with companion animals (VCNZ 2016). This over representation of companion animal veterinarians may be due to the high volume of cases seen in small animal practices, the higher fees charged in small animal compared to production animal cases or the emotional bond between companion animal owners and their pets.

Male practitioners were respondents in 70% of the complaints during the 1992-2016 study period. Between 2008 and 2014 53-58% of the FTE practising veterinarians in New Zealand were male, although registered female veterinarians have outnumbered males since 2015 (VCNZ 2015; 2016). The higher proportion of complaints made against male veterinarians could merely be a reflection of the higher proportion of male veterinarians in the work force, so this proportion might be expected to change as more women than men graduate as veterinarians. It should be noted that this figure represents the total number of notifications or complaints that were recorded involving male respondents and does not account for possible double counts due to male veterinarians having more than one complaint laid against them during this period. Previous studies on doctors facing professional misconduct charges in New Zealand and Australia have echoed these findings and identified male doctors as overrepresented in investigatory proceedings and disciplinary tribunals (Cunningham *et al.* 2003; Elkin *et al.* 2011). A widely held explanation for the higher proportion of complaints made against male versus female medical practitioners is that female doctors tend to demonstrate more attributes that nurture the good doctor-patient relationship, thus reducing the incidence of patient complaints and subsequent disciplinary proceedings (Elkin *et al.* 2011). This is probably a simplistic explanation, however, as the gender demographics of both professions is highly confounded by age, i.e. there are more older males and more younger females, and practice type, i.e. males are more likely to be in solo or small practices than are women. Both of these factors have been consistently shown, at least for



medical practice, to affect the risk of being the subject of a complaint (Cunningham *et al.* 2003; Elkin *et al.* 2011; Bismark *et al.* 2013).

This notion is supported in the present study, in which practitioners registered as veterinarians for  $\geq 21$  years appeared to have more complaints lodged against them (43.5% of all complaints) than those registered for  $\leq 1$  year (3.2%), 2-10 years (22.8%) and 11-20 years (30.4%). Similarly, Elkin *et al.* (2011) reported that medical practitioners gained their medical qualifications an average of 21.4 years before facing disciplinary charges. Bismark *et al.* (2013) examined 18,907 formal patient complaints filed against medical practitioners in Australia over an 11-year period and found medical practitioners over 35-years-old had a 30-40% higher risk of recurrence compared to younger practitioners. These findings, however, may reflect the fact that those practitioners with more working experience would have experienced more client interactions which could potentially give rise to complaints.

The TA component of this study highlighted the fact that the clients placed great importance on the honesty and trustworthiness of the veterinarian, with clients expecting their opinions to be taken into account and to be involved in the clinical decision-making. Hughes *et al.* (2018) also reported that clients wanted to trust their veterinarian but also wanted the veterinarian to respect them and trust their judgement. In addition, issues such as getting informed consent from the client and maintaining client confidentiality touched on the integrity of the veterinarian-client relationship. Clients also preferred staff consistency and clearly defined staff roles. To be able to develop a strong veterinarian-client relationship it helped to be able to see the same veterinarian each time and to know the roles of the veterinary staff who interacted with them (Hughes *et al.* 2018).

The TA component of this study also revealed that communication between the veterinarian and the client underpinned many of the notifications or complaints. Hughes *et al.* (2018) reported that clients experienced higher satisfaction when veterinarians showed good communication skills and displayed empathy towards the clients more so than to the patient. Those authors also reported the importance of veterinarians tailoring their communications appropriately to the

knowledge level and interest of their clients (Hughes *et al.* 2018). Poor communication accounted for 143/817 (17%) complaints lodged with the Royal College of Veterinary Surgeons (RCVS 2014), and good veterinary-client communication was reported by clients as an essential attribute for veterinary staff (Clarke *et al.* 2015). A study involving 124 physicians in the United States of America found that medical practitioners with good communication skills, who informed patients about what to expect and solicited patients' understanding and opinions, had significantly fewer malpractice claims lodged against them compared to those who did not exhibit these behaviours (Levinson *et al.* 1997).

It was also apparent that client grievances sometimes arose when the veterinarian was not from the same ethnic group as the client. Many veterinarians who graduated overseas come from different cultural backgrounds and the TA indicated that veterinarians from cultural backgrounds that are foreign to New Zealand did not appear to fit the client's preconceived image of an acceptable veterinarian. In this context, it was noted that many of the communication issues revolved around the client claiming that they could not understand the veterinary staff member because they had a foreign accent. In contrast, Cunningham *et al.* (2003) reported that doctors who had graduated from an institution outside the country of practice did not seem to be at a higher risk than doctors trained in New Zealand. Issues of miscommunication between ethnicities or cultures present future challenges to the veterinary profession, particularly as, between 2008 and 2015, international graduates represented 24-28% of all FTE working in companion animal practice in New Zealand (VCNZ 2015; 2016).

Complaints about fees arose in the context of serious complications or fatalities that the veterinarian had not predicted. In the medical profession, clients' motivation for initiating litigation was rarely financial but usually determined by the way the incident was originally handled, to gain an explanation of exactly what had happened, or when clients perceived a coverup with no explanation or apology offered (Vincent *et al.* 1994; Chiu 2010).

A possible limitation of the current study is that it was based on clients' interpretations of situations, and not all dissatisfied clients will raise a formal

complaint. These were, therefore, perhaps only a small sample of the problems that clients may have felt they had encountered with veterinarians. The proportions of the various notifications or complaints reported should not, therefore, be construed as direct indicators of the prevalence of such behaviours in practice. As discussed by Elkin *et al.* (2011) the proportions reported in the present study represented an interaction between the underlying prevalence of misconduct, the prevalence of reporting and the response of the VCNZ and it is not possible to distinguish the independent role of any one of them in determining the reported prevalence. It was encouraging, however, that the findings were so well aligned with findings from similar studies conducted internationally and in the medical profession.

Another critique that could be levelled against the data was that they reflected only clients' subjective perceptions and not necessarily the reality of veterinarian-client interactions. Clients may subjectively rate a certain professional attribute as more important in a veterinarian, whereas in reality other attributes may have a greater influence on satisfactory outcomes (Hughes *et al.* 2018). The TA could have taken different approaches; a realist approach would focus on the content of the experiences expressed by clients; a constructionist approach would focus on the different discourses and interpretations used by clients; while a contextualist approach would examine how complainants constructed meaning and how the social context influenced these meanings (Lundgren *et al.* 2016). In the analysis, it became clear that all parties involved in a complaint expected a realist interpretation of their grievances (clients) or explanations (veterinarians). Both parties wanted the VCNZ to take their stories at face value and constructed their experiences and actions in the most personally advantageous way. Clients constructed a discourse around the veterinarian's perceived competence and level of care provided, and the veterinarians constructed discourses around the client's perceived misconception of the veterinarian's good intentions. The VCNZ adopted a constructionist approach, interpreting the veterinarian's actions through the lens of the original complaint and the veterinarian's response.

While it was unavoidable that the data were subjective, these findings should be taken to reflect what clients, who were sufficiently committed to raise a formal

complaint, considered to be key shortfalls in their interactions with veterinarians. The major themes and minor themes illustrated in Figure 7.A, all reflected competencies that could be developed or improved through training and experience. This has implications for the veterinary undergraduate curriculum and for professional development for practising veterinarians in New Zealand, and these will form the focus of further research.

### **7.6. Summary**

Notification and complaint data for 1992-2016 largely reflected the demographics of the veterinary profession, with complaints against male practitioners outnumbering those against female practitioners. Small animal practitioners were over-represented compared to practitioners in livestock and equine practice. Older practitioners were more likely to be the subject of complaints than were practitioners who had graduated more recently. Many complaints that were ostensibly related to 'technical failures', were shown by TA to also represent underlying failures of professional behaviour. Key issues included trustworthiness, honesty, good quality care and acceptable communication with the client. Fees *per se* were not a major issue but were often cited as a proxy for inadequate care or an untoward outcome of the case. Nonetheless, clients' interpretations of situations may not necessarily reflect the reality of veterinarian-client interactions. The present data should not be interpreted as an accurate indicator of the prevalence of misconduct in practice, as the proportion of dissatisfied clients who did not raise a notification or complaint is unknown. Accurate classification of complaints will enable veterinary regulators and educators to emphasise potential pitfalls to graduates and registrants.



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## STATEMENT OF CONTRIBUTION DOCTORATE WITH PUBLICATIONS/MANUSCRIPTS

We, the candidate and the candidate's Primary Supervisor, certify that all co-authors have consented to their work being included in the thesis and they have accepted the candidate's contribution as indicated below in the *Statement of Originality*.

Name of candidate:	S. J. G. Gordon	
Name/title of Primary Supervisor:	J. Benschop	
Name of Research Output and full reference:		
S.J.G Gordon, O.H Gerber, J.F Weston, C.F Bekwell, J Benschop & T.J Patterson (2019) Quantitative and thematic analysis of complaints by clients against clinical veterinary practitioners in New Zealand. <i>New Zealand Veterinary Journal</i> , 67(3), 117-125. D		
In which Chapter is the Manuscript /Published work:	Chapter 7	
Please indicate:		
• The percentage of the manuscript/Published Work that was contributed by the candidate:	80%	
and		
• Describe the contribution that the candidate has made to the Manuscript/Published Work:	Human ethics application; All data gathering; All statistical and thematic analysis of data; Full literature review on medical complaints; Compilation of findings and write up of article: Submission of article to <i>New Zealand Veterinary Journal</i> for review:	
For manuscripts intended for publication please indicate target journal:		
Candidate's Signature:	Stuart John Galt Gordon	Digitally signed by Stuart John Galt Gordon Date: 2020.05.22 15:25:02 +12'00'
Date:		
Primary Supervisor's Signature:	Jackie Benschop	Digitally signed by Jackie Benschop Date: 2020.06.01 17:00:02 +12'00'
Date:		

(This form should appear at the end of each thesis chapter/section/appendix submitted as a manuscript/ publication or collected as an appendix at the end of the thesis)

## **8. General discussion**

### **8.1. Overview**

This research described in this thesis aimed to identify attributes of veterinary professionalism that are important for career success, through the perceptions of three cohorts of veterinary stakeholders (veterinary students, clinical veterinary practitioners and veterinary clients). These opinions were elicited through card-sort analysis, online questionnaires, focus groups, critical incident reporting and an analysis of client complaints. This final chapter reviews these components of professionalism and reports on a framework of factors that determine veterinary career success, developed following a constructivist grounded theory (GT) approach. Final year veterinary students' opinion on veterinary professionalism education is also used to help inform future curricula in professionalism. The candidate's personal reflections on this research project, including the strengths and limitations of the research design, are then considered. The chapter ends with an exploration of potential future research directions and final conclusions to the thesis.

### **8.2. Developing a framework of veterinary professionalism**

#### **8.2.1. Introduction**

To date, research on veterinary professionalism has produced many lists of potential skills and attributes that could define professionalism, with little attempt to integrate these into a cohesive whole. Previous studies on veterinary professionalism have included surveys, focus groups and interviews of veterinary students, clinical staff, veterinary practitioners and recent veterinary graduates (Cake *et al.* 2016). The present study has expanded on these, in that card-sort analyses, critical-incident interviews and reviews of client complaints have also been used, apparently for the first time, to derive essential competency frameworks for veterinary professionalism. Furthermore, the current study has sought to gain a broad understanding of professionalism by appraising the voices of all tiers of stakeholders of veterinary clinical practice (students, practitioners

and clients), rather than (as abounds in the literature) solely gathering the opinions of one group of experts and trying to use these to generalise across the profession. The present research uses these data as the basis for synthesising not only its own findings, but also the lists of attributes from other studies, into a cohesive model of professionalism in the veterinary context. In doing so, it also provides evidential support for the importance of including the study of veterinary professionalism in primary veterinary qualifications.

The synthesis of data into a unifying explanation of veterinary professionalism has been undertaken primarily through a GT approach. In other words, the research has sought to use existing knowledge contained within the literature on veterinary and medical professionalism alongside, and to provide a foundation for, the perspectives of different veterinary stakeholders reported in each chapter. Each chapter used a different methodology, thereby providing a triangulation of the findings. The iterative sampling method employed has ensured that a wide range of perceptions were represented and considered. The resulting framework has, therefore, been grounded in multiple sets of data and is developed in this final chapter to provide an evidence-based explanatory framework with the power to make predictions.

### **8.2.2. The theoretical framework of veterinary professionalism**

The overarching themes, major themes and minor themes, derived from thematic analysis (TA), for the final year veterinary students (Chapter 5), clinical veterinary practitioners (Chapter 6) and veterinary clients (Chapter 7) are shown in Table 8.A.

**Table 8.A:** The overarching themes, major themes and minor themes identified for the final year veterinary students, clinical veterinary practitioners and veterinary clients in Chapters 5, 6 and 7.

Cohort	Overarching theme	Major theme	Minor theme
Final year veterinary students (Chapter 5)	Committing to best practice	Communicating with the client and building rapport	<ul style="list-style-type: none"> <li>Accounting for client diversity</li> <li>Acknowledging the human-animal bond</li> <li>Affording the client courtesy and respect</li> <li>Demonstrating reflective listening</li> <li>Displaying appropriate non-verbal behaviour</li> <li>Displaying empathy towards the client</li> <li>Providing clear explanations to the client</li> <li>Resolving disputes with the client amicably</li> </ul>
		Demonstrating accountability and integrity	<ul style="list-style-type: none"> <li>Possessing an entrepreneurial spirit</li> <li>Charging fairly and appropriately</li> <li>Accepting and admitting mistakes</li> <li>Accepting responsibility for actions</li> <li>Managing time effectively</li> <li>Committing to life-long learning</li> </ul>
		Committing to personal wellbeing	<ul style="list-style-type: none"> <li>Demonstrating collegiality and effective teamwork</li> <li>Engaging in reflective practice</li> <li>Enjoying self-confidence</li> <li>Maintaining an optimum work-life balance</li> <li>Possessing resilience</li> <li>Possessing self-awareness and self-regulation</li> <li>Maintaining a positive attitude and sense of humour</li> <li>Showing adaptability</li> </ul>
Clinical veterinary practitioners (Chapter 6)	Building the veterinarian-client relationship	Communication skills	<ul style="list-style-type: none"> <li>Acknowledging the human-animal bond</li> <li>Showing the client courtesy and respect</li> <li>Demonstrating reflective listening</li> <li>Displaying appropriate non-verbal behaviour</li> <li>Displaying empathy towards the client</li> <li>Establishing mutually agreeable agendas with the client</li> <li>Providing clear explanations to the client</li> <li>Engaging in good interpersonal communication with peers</li> <li>Getting client consent</li> <li>Keeping good medical records</li> <li>Accounting for the client's opinion</li> <li>Building rapport with the client</li> </ul>

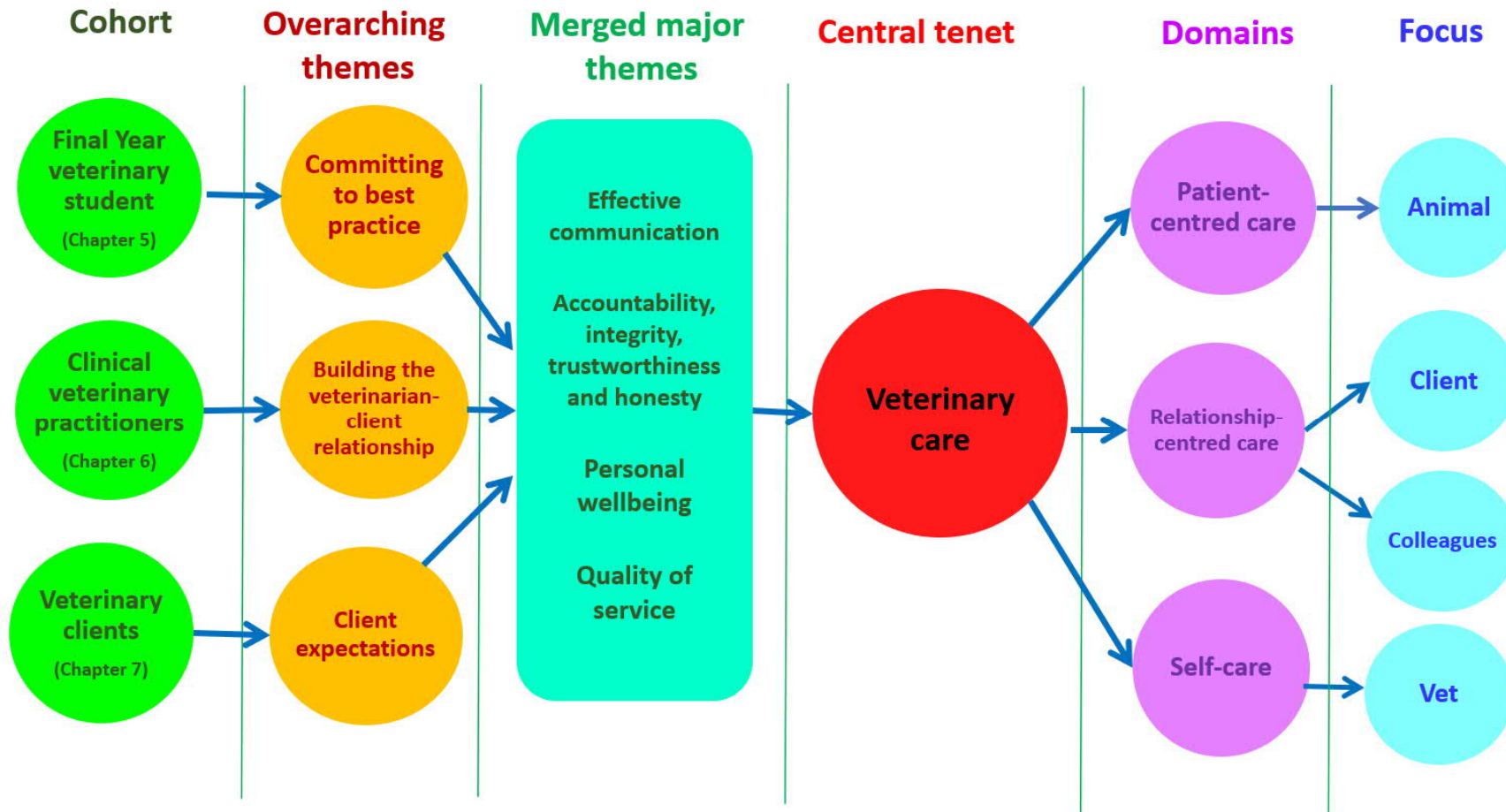


Cohort	Overarching theme	Major theme	Minor theme
		Accountability and integrity	<ul style="list-style-type: none"> <li>• Admitting mistakes and apologising</li> <li>• Accepting responsibility</li> <li>• Acknowledging limitations</li> <li>• Being honest</li> <li>• Being trustworthy</li> </ul>
		Personal wellbeing	<ul style="list-style-type: none"> <li>• Receiving collegial support</li> <li>• Engaging in reflective practice</li> <li>• Enjoying self-confidence and self-esteem</li> <li>• Maintaining good work-life balance</li> <li>• Possessing resilience</li> </ul>
		Quality of care	<ul style="list-style-type: none"> <li>• Empathy and care shown towards patients</li> <li>• Technical competency</li> <li>• Staffing levels</li> <li>• Time management</li> </ul>
Veterinary clients (Chapter 7)	Client expectations	The veterinarian will communicate in a way that the client finds acceptable	<ul style="list-style-type: none"> <li>• Interpersonal communication style</li> <li>• Means of communication</li> <li>• Responsiveness of veterinarian</li> </ul>
		The veterinarian will be trustworthy and honest	<ul style="list-style-type: none"> <li>• Admitting mistakes</li> <li>• Obtaining informed consent</li> <li>• Keeping accurate and truthful records</li> <li>• Declaring conflicts of interest</li> <li>• Maintaining confidentiality</li> </ul>
		The veterinarian will provide good quality care	<ul style="list-style-type: none"> <li>• Appropriate care and empathy</li> <li>• Adequate equipment/resources/staffing</li> <li>• Adequate level of knowledge and technical competence</li> </ul>
		The veterinarian will charge fairly	

In order to develop the final framework, the minor and major themes that emerged from the overarching themes from the three groups of participants were examined and compared. Similarities were noted between the minor and major themes across the three cohorts and these themes were merged into four overarching themes: 'effective communication'; 'accountability, integrity, trustworthiness and honesty'; 'personal wellbeing'; and 'quality of service' (Figure 8.A).

These findings echoed those from the quantitative component of this research in Chapters 4 and 5. There was a considerable level of correspondence between the opinions of first year (Chapter 4) and final year (Chapter 5) students derived from the card-sort and survey responses. Firstly, both cohorts identified the importance of communication and trust-based relationships with clients (Year 1: 'establishing and maintaining effective relationships with clients', 'showing integrity', 'gaining clients' trust and respect'; Year 5: 'communicating with the client and building rapport, 'demonstrating accountability and integrity'). Secondly, both identified aspects of personal care (Year 1: 'personal wellbeing and self-management'; Year 5: 'committing to personal wellbeing') as being critical for success.

Under the central tenet of 'veterinary care', three domains of care were identified: patient-centred care, relationship-centred care, and self-care. The focus of patient-centred care is the animal, while the foci of relationship-centred care are the client and veterinary colleagues. The self-care domain focuses on the practising veterinarian as an individual (Figure 8.A). Professionalism, therefore, fundamentally revolves around veterinarians' accountability to a social contract with patients, clients and colleagues (Cake *et al.* 2019) as well as their responsibilities to themselves. Practising veterinarians must juggle the demands of these competing domains in order to provide sustained veterinary care in a professional manner. Although strength in one domain of veterinary care does not necessarily mean strength in another, successful veterinarians require proficiency in all three domains.



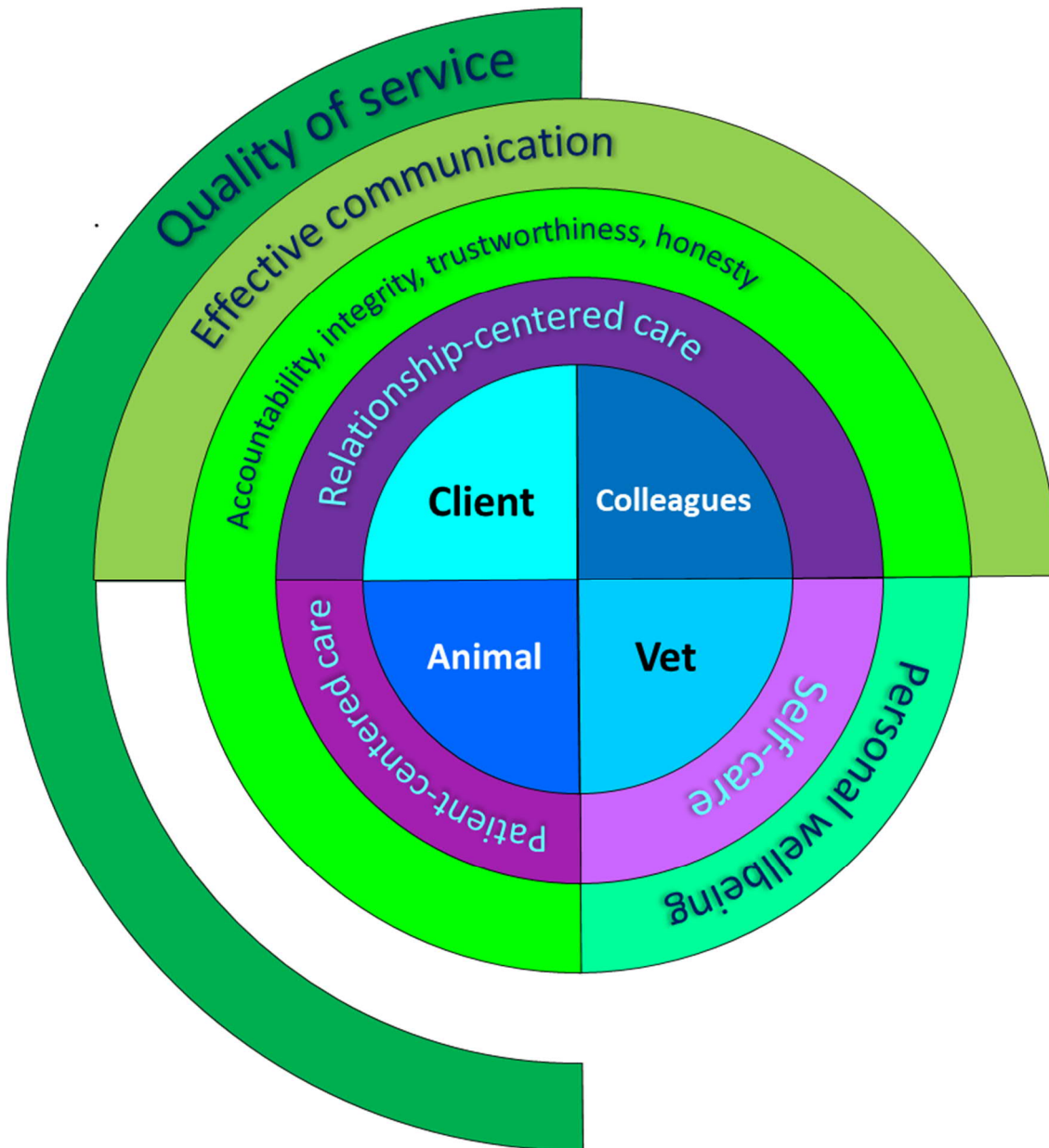
**Figure 8.A:** Flow diagram to demonstrate the three overarching themes, the merged major themes and the focus of each domain of veterinary care.

The postulated framework of veterinary professionalism, based upon the present research, is illustrated using a multi-layered model with segmented concentric circles as shown in Figure 8.B. This model could be referred to as a 'Navigational compass to guide veterinary care' and represents a GT-based perspective on veterinary professionalism. The 'compass' reference represents a metaphor to demonstrate to veterinary practitioners how they might use this framework to navigate their way to a fulfilling and prosperous career.

In the model, the centre of the compass is occupied by the **four foci** of veterinary care (client, colleagues, veterinarian and animal - blue shaded in Figure 8.B). The **three domains** of veterinary care sit as the first layer of concentric rings (shaded purple/pink) aligned to their appropriate central foci. Surrounding the three domains are the **four major themes** of veterinary professionalism radiating out in concentric semi-circles (shaded green). Each of these themes is aligned to the appropriate domains of care. The themes associated with each domain represent the attributes of professionalism that veterinarians would need to display in relation to that domain. The domains and their associated themes are explained in more detail below.

### **8.2.2.1. *Patient-centred care***

Patient-centred care focuses on the animal/patient and is associated with the themes of 'quality of service' and 'accountability, integrity, trustworthiness and honesty'. Patient-centred care has been the traditional approach to education adopted by veterinary schools in their emphasis upon academic knowledge and technical competencies. The 'quality of service' theme directly impacts the



**Figure 8.B:** The ‘Navigational compass to guide veterinary care’: A segmented concentric circles diagram to represent a grounded theoretical framework of veterinary professionalism.

relationship between veterinarians and the animals under their care. Important veterinary professionalism attributes identified under this theme include personal attributes, namely medical and surgical knowledge, technical competence and showing sufficient care and compassion towards the animal, as well as attributes related to running the veterinary practice such as adequate equipment, resources and staffing levels to ensure optimum animal care.

Willis *et al.* (2007) questioned whether a veterinarian's primary obligation was to the animal or to the owner. In the present study, all cohorts of veterinary stakeholders recognised that perceptions of veterinarians' responsibilities have expanded to include the wellbeing of clients as well as their animals. Thus, it is now generally considered that veterinarians have two different allegiances: the animal-oriented physician/healer and the client-oriented counsellor (Tannenbaum 1993; 1995). The healer model relates to the treatment and management of the patient, whilst counsellor model describes the importance of a supportive relationship between the veterinarian and the client. Rollin (2011) claimed that most veterinarians would default to the animal-oriented physician model and put the animal's welfare first when making ethical decisions. However, placing animal welfare at the forefront of veterinary care can be misunderstood by clients when decisions are made which are (or appear to be) contrary to the client's priorities (Mosso 2012a). This tension is highlighted in the present study in situations in which allegations of unprofessional behaviour were made by clients against veterinarians when these priorities were compromised.

Patient-centred care also overlapped with the theme of 'accountability, integrity, trustworthiness and honesty'. It is clearly in the best interests of the animal and client if veterinarians acknowledge their technical limitations and admit to any clinical mistakes made.

### **8.2.2.2. *Relationship-centred care***

The second overarching theme that emerged from the veterinary stakeholder groups was the importance of nurturing the veterinarian-client relationship. This appears to be the central essence of veterinary career success. Relationship-

centred care focuses on the client and on veterinary colleagues and is associated with the themes of 'effective communication' and 'accountability, integrity, trustworthiness and honesty'. In addition, the 'quality of service' theme is important when adopting a client focus. Under these themes, the research conducted on clients' complaints underscored the importance that clients place on the veterinarian responding appropriately to their needs, obtaining informed consent before starting procedures, keeping accurate medical records, maintaining confidentiality and avoiding conflicts of interest. Furthermore, it was expected that the veterinarian would show appropriate levels of empathy towards the client.

More focus has been placed on the client domain in recent years, as the importance of relationship-centred care has gained traction. Cornell and Kopcha (2007) have referred to this veterinarian-client relationship as a 'partnership in care'. The traditional paternalistic relationship between the veterinarian and the client is increasingly recognised as outdated and is being replaced by a recognition of the dual role of client and customer. Veterinary professionalism is a complex interaction between veterinarians and their clients and requires a delicate balancing of the demands of these two parties, and, often, the overarching principle of animal welfare can be difficult to maintain (Martimianakis *et al.* 2009). A veterinarian-client relationship based on accountability, integrity, trustworthiness and honesty should help minimise conflict when veterinarians make decisions about animal treatment and welfare that contradict the client's viewpoints (Mossop 2012a).

Good interpersonal skills with veterinary colleagues (veterinarians and veterinary support staff) are also important for relationship-centred care. A collegial relationship includes 'effective interpersonal communication skills' and 'collegial support' as important components. The relationships between veterinary colleagues in the workplace can be complex. Failure to communicate effectively can compromise the quality of service offered to clients and can compromise the patient's level of care. Veterinarians have a responsibility to maintain and promote a professionally respectful attitude in all interactions and

communications with colleagues; this also helps foster client trust in the integrity of the profession (Block *et al.* 2006).

### **8.2.2.3. Self-care**

The focus of self-care is the wellbeing of the veterinarian. Under the theme of 'personal wellbeing', both veterinary students and practising veterinarians highlighted important attributes of veterinary professionalism that included 'engaging in reflective practice', 'possessing resilience' and 'maintaining an optimum work-life balance'.

Personal responsibility for their own wellbeing has traditionally been a very weak area of the veterinary profession's skillset (Bartram and Baldwin 2007). Whilst some veterinarians have used resources such as mentors, peer support groups or counselling services, these have not always been available and the decision to use them has been a matter of personal choice. Self-help practices such as meditation or mindfulness have been advocated, although again this is largely a matter of personal choice. Moir and Van den Brink (2020) have argued that veterinary employers and regulatory authorities should assume more responsibility for the wellbeing of veterinarians. This is especially pertinent considering that organisational factors such as the work environment and levels of workload can directly impact wellbeing (Brigham *et al.* 2018). Riggs *et al.* (2001) found that newly graduated veterinarians complained of their employers' unreasonable expectations towards workloads and time management, and favoured regular practice meetings and mentor support systems to help alleviate these difficulties. The use of mentors (in the United Kingdom and Ireland) has been associated with facilitating the transition between student and practitioner and has improved mental wellbeing and retention rates within the profession (Graham 2016).

The role that undergraduate veterinary education plays in promoting self-care must also be considered. Based on the findings of the present studies, it seems that initiatives that enhance self-care need to be integrated into the curriculum. These should include development in recognising personal and professional



limitations, adapting to continuously changing circumstances, working effectively with colleagues and demonstrating effective teamwork and leadership (Goldie 2008). Mossop and Cobb (2013) suggested that to achieve this, the potential contributions of psychologists, bioethicists and sociologists to the curriculum around self-care and wellbeing should be considered. Teaching about specific mental health issues and strategies to alleviate them, all within a safe and supportive environment, has been advocated as a means of helping consolidate the principles of self-care in veterinary students (Liu and van Gelderen 2020).

### **8.3. Fostering veterinary professionalism development in the veterinary curriculum**

Fostering the development of professionalism in a veterinary qualification remains a challenge as it involves personal and intangible factors such as self-awareness, reflective practice and resilience (Cake *et al.* 2019). The teaching and assessment of professionalism should be formally and explicitly identified in the curriculum, and careful attention is needed to define, position and frame professionalism within the veterinary context (O'Sullivan *et al.* 2012).

The fifth-year veterinary students of 2017 represented the first cohort of students who had experienced the full veterinary professionalism educational programme in the new veterinary curriculum at Massey University. Their opinions on the advantages and disadvantages of the current programme were, therefore, regarded as extremely pertinent. Insight into veterinary students' opinions about the teaching and assessment of professionalism in the veterinary undergraduate curriculum will help to shape future professionalism training programmes. Based primarily on the final year veterinary students' viewpoints and recommendations (but also accounting for the multiple perspectives of the other participants in this series of studies), primary qualifications in veterinary science should include the following veterinary professionalism educational initiatives:

### **8.3.1. The veterinary professionalism course should be embedded across the whole course, including the first years of the programme**

Although final year student respondents often admitted to questioning the relevance of the syllabus in veterinary professionalism in the first few years of the primary veterinary teaching programme, they acknowledged that its importance became more apparent to them during the clinical stages of the course. Moreover, final year students considered that the teaching of professionalism should be fully embedded in the curriculum and cover the whole programme.

These findings highlight the need for a pedagogy of professionalism that engages students early in the course. In the first year or two of the programme, the teaching of professionalism is probably best aligned to clinical experiences (or examples) in order to underscore its relevance to the entire syllabus. Thus, Cake *et al.* (2018) have argued that the relevance of instruction in professionalism could be augmented by framing and delivering the material in a clinical veterinary context rather than being provided in a generic or an abstract context. They therefore considered that teaching of veterinary professionalism is best contextualised when it is integrated into clinical teaching. Indeed, there is considerable literature (Lloyd and Walsh 2002; Goldie *et al.* 2007; Birden and Usherwood 2013) on the benefits of early clinical exposure in the veterinary and medical educational programmes: not only does it provide context for students' early steps in developing their professionalism skills, but it can also be used as a contextual anchor for many other aspects of pre- and para-clinical instruction. This finding was aligned with the opinion of O'Sullivan *et al.* (2012, p 68) that: "*Students will develop professionalism more effectively when involved in clinically related tasks rather than guided classroom-based activities*". Educational methodologies that incorporate the use of clinical context in a reflective and dialogical approach help to develop a dynamic process of thinking in practice. This contextual learning represents a reflective learning intervention that creates opportunities for medical (and veterinary) educators to prepare students to think critically in practice (Forneris and Peden-McAlpine 2006). Moreover, when the teaching of professionalism in the earlier years of the program is supported and/or delivered by clinical teaching staff, it provides the additional benefit of exposure

to clinical role models, which will further help to motivate and mould student learning (Goldie *et al.* 2007). Learning opportunities should, therefore, be constructed such that students in the first few years of the veterinary degree become engaged with learning experiences that reflect their future career roles (Howe 2002).

Successful embedding of the teaching of professionalism into the undergraduate veterinary curriculum requires commitment at an institutional and faculty level (Wasserstein *et al.* 2007). Howe (2002) has warned that where the clinical culture within the University teaching hospital or surrounding practices does not display and integrate similar values as those encouraged in the students, the result will be to undermine the professional development environment and diminish the impact of the curriculum. Students will struggle to appreciate the value of appropriate professional behaviour when they observe practices in teaching hospitals based on competition, economic concerns, and the misuse of authority (Stephenson *et al.* 2001). The corollary of these issues is that educators in veterinary schools should embody the values and behaviours that are desired of the students and be careful not to marginalise the professional development aspect of the curriculum by allocating limited resources, especially in terms of tutor availability. A framework for both the theory and practice of professionalism development that results in the achievement of life-long professionalism competence clearly needs to be established (Howe 2002).

### **8.3.2. Role-playing should be used throughout the programme to support the teaching of professionalism**

Role-playing was identified by the final year respondents as a teaching method that they envisaged would provide students with the opportunity to practise and reflect on professionalism skills within a safe learning environment. This accords with the work of Armitage-Chan and Whiting (2016), which showed that students at any stage of their veterinary degree should be presented with role-playing scenarios that consolidate or even challenge their professionalism attitudes and behaviours. They further considered that it is essential that students engaging in

these learning activities are provided with constructive feedback to support their ongoing development.

### **8.3.3. Reflective practice should be encouraged as an effective means of developing professionalism**

Reflective practice allows students to learn effectively from experience and to “*develop the affective aspect of their professional expertise by considering experience critically and understanding how knowledge, attitudes, and skills develop*” (Kenny *et al.* 2003 p 1208). Learning activities that required reflective practice were identified by the final year respondents as an essential component of professionalism development. Interestingly, this accords with the opinions of clinical practitioners (Chapter 6), who indicated in their critical incident narratives that the development of professionalism benefits from a combination of clinical experience and reflection on that experience. Likewise, Wear and Castellani (2000) noted that students are able to develop appropriate professionalism values and attitudes if they are provided with the opportunities to formally reflect on their experiences. Goldie *et al.* (2007) pointed out that the sharing of clinical experiences by clinicians and students within a clinical setting serves as a rich source of useful reflective material during debriefing sessions. Furthermore, debriefing is seen as an essential element in the reflective process as it provides a safe and authentic environment for the constructive criticism of colleagues. Whilst it is preferable for such shared experiences to be clinically orientated during the early years of veterinary training, this is not an imperative. Much useful learning can be obtained from reflective practice within basic science or agricultural domains (Mossop and Cobb 2013).

### **8.3.4. Veterinary professionalism must be appropriately assessed, including appropriate rewards for displays of good behaviour**

Because of the complex nature of veterinary professionalism, defining explicit learning outcomes remains problematic. The assessment of professionalism behaviour needs to be constructed carefully to enable students to appreciate the responsibilities of the profession. Suitable assessment methods for veterinary professionalism identified by the final year students include reflective writing,

contributions to group discussions, e-portfolios, direct observations in suitable clinical contexts and peer assessment. Students in the study of Goldie *et al.* (2007) reported on the value of reflective portfolios as a learning tool and as a method of assessment. The VetSet2Go project (Cake *et al.* 2019) found that multiple forms of low-stakes assessments from many different sources (including clinical instructors, support staff and peers), accompanied by constructive feedback, represented the most suitable assessment approach. Likewise, the tutors in the studies of medical professionalism teaching programmes by Goldie *et al.* (2007) endorsed the use of a wide range of formative assessment instruments and resources to assess student professionalism but held mixed opinions over whether summative assessment could be used effectively. Indeed, the VetSet2Go report (Cake *et al.* 2019 p ix) considered that, rather than summative and criterion-driven assessment, professionalism development: “...*is better targeted formatively through guided reflection, experiential learning, mentoring and rich multisource feedback*”.

The VetSet2Go project (Cake *et al.* 2019) also proposed that work-integrated learning (WIL) provided a tremendous opportunity for the valid and authentic assessment of students, as it was based on the direct observation of student performance in a realistic work environment. The types of learning outcomes that have been recognised for WIL curricula include the experience of the work environment; the development of clinical skills; and the application of disciplinary knowledge within the work context (Smith 2014). Torres *et al.* (2019) maintained that private practitioners could identify the skills and knowledge needed by new graduates better than faculty academics. This is because private practitioners act as both practising veterinarians and employers, while academics are often specialists within defined areas with limited outside views of the profession. This viewpoint was borne out by the clinical practitioners who participated in the present study (Chapter 6). Many of them accepted final year students on external placements at their veterinary practices and acknowledged the responsibility they held when assessing student performance on behalf of the University. These views were, however, contrary to the opinion espoused by McNamara (2013) who expressed concern over whether workplace supervisors possessed the specialised skills required for assessment. Furthermore, it is difficult to ensure

that each supervisor holds a consistent perception about what needs to be assessed and what standards are expected.

To rely solely on evidence provided by students to support their own claims for learning professionalism in the workplace could also be problematic. Brodie and Irving (2007) maintained that evidence provided by students is not necessarily an assessment of professionalism competence, but instead represents students' ability to articulate their stage of development of competence. Perhaps, therefore, a mixture of evidence provided by the workplace supervisor, the student and the academic supervisor should be used to assess professionalism competence in WIL (McNamara 2013).

The notion of whether it is valid to undertake any form of summative assessment of veterinary professionalism does, however, require a little further exploration. Thus, Wear and Castellani (2000) wondered whether the current evaluative criteria of competency and success that are prevalent in contemporary medical education are actually inimical with the precepts required for assessment of professional behaviour. It is clear that veterinary teaching staff tend towards a logic-rational approach, in which content knowledge and mastery of traditional clinical skills are favoured over a more post-positivistic approach to teaching and learning (Goldie *et al.* 2007).

Thus, it may be that, as asserted by Goldie *et al.* (2007 p 615): "*The transmission of these attitudes, together with the lack of formal assessment of professionalism in the context of a strong pre-existing examination orientation among students, is detrimental to their development as professionals*". In other words, objectivity, replicability and generalisability are currently regarded as important attributes in the teaching and assessment of veterinary medicine, such that a strong adherence to such notions of scientific knowledge and empirical methods permeate areas of veterinary professionalism pedagogy. Alternative domains of knowledge and modes of enquiry embracing philosophy, sociology and spirituality may in fact better serve the teaching and assessment of veterinary professionalism (Wear and Castellani 2000; Armitage-Chan 2016).

In this context, it is germane to consider whether displays of good professionalism should be recognised and rewarded. Final year student respondents in the present study complained that there was often little recognition by clinicians of students displaying good veterinary professionalism behaviour in the teaching hospital, yet breaches of this behaviour routinely attracted censure. One step towards receiving student support for veterinary professionalism training might be to acknowledge and reward students who demonstrate good veterinary professional behaviour. Since a failure to demonstrate appropriate professionalism behaviour and attitude has traditionally been punished in medical and veterinary schools, there is a risk that the opportunity to place a positive value on this part of the curriculum could be overlooked (O'Sullivan *et al.* 2012). Digital badges or completion certificates represent efficient, appropriate and easy ways for educators to reward students for skills obtained in professional development (Shields and Chugh 2017). The positive acknowledgement of professionalism achievement must be recognised by students as having a greater emphasis than the punishment of unprofessional behaviour and attitudes.

### **8.3.5. The detrimental effects of the hidden curriculum and negative role models should be mitigated**

Final year veterinary students recognised the potentially destructive effect of the hidden curriculum on veterinary professionalism development. Cruess and Cruess, (2006) similarly noted that, in order to promote a culture within a veterinary undergraduate curriculum that values professionalism, the active participation of academic deans, heads of schools and curriculum developers is required. These authorities would need to signal the importance of professionalism in the curriculum and support the incorporation of a professionalism programme in the curriculum as well as allocating resources to deliver it.

Many traditional veterinary schools still foster a climate of competition, humiliation and hierarchy that remains as an obstacle to student learning. The institutional environment must support the teaching of professionalism as otherwise the hidden curriculum possesses the potential to undermine the entire

professionalism programme (Goldie 2008). Indeed, the destructive effect of negative role models and routine belittling of students' achievements is well documented in the medical literature. Repeated exposure to negative role modelling may adversely impact the development of professionalism in medical students (Kenny *et al.* 2003). In a Canadian survey, 25% of second year medical students and 40% of senior students reported that their clinical instructors acted as poor role models for the physician-patient relationship (Maheux *et al.* 2000). Dyrbye and Shanafelt (2016) reported that working with cynical residents caused stress, anxiety and potential burnout among third and fourth year medical students. Furthermore, studies have found that medical students who perceive they have been belittled or mistreated by supervisors are more likely to experience depression and burnout (Dyrbye *et al.* 2007; Dyrbye *et al.* 2009; Cook *et al.* 2014).

Moreover, Birden and Usherwood (2013) noted the double standard of faculty expecting high standards of professionalism from students, whilst tolerating displays of poor professionalism by senior clinical staff. In the present study, final year students recognised that role models and mentoring relationships in the clinic are important for helping to shape professionalism development. Professionalism behaviour and attitudes can be undermined by negative role modelling encountered by students during clinical practice. O'Sullivan *et al.* (2012) noted that the impact of negative role-models could, however, be minimised by holding formalised reflections with students on the negative interactions. Students need formal discussion and guidance in reflecting on, and learning from, inconsistent and non-exemplary professionalism behaviour observed in the clinical setting. Recognising and critically analysing the events that reflected unprofessional behaviour by negative role-models could allow the students to become their own teachers of professionalism (Stern 2003).

### **8.3.6. The veterinary professionalism teaching programme should prepare graduates for the job market**

Final year veterinary students and clinical practitioners implied that understanding and meeting clients' and employers' needs would be an essential



requirement for developing a programme in veterinary professionalism. Tailoring the educational programme to account for the current needs of both clients and veterinarians would better prepare the new graduates for the profession (Hughes *et al.* 2018). Small *et al.* (2018) reported that universities have recently been criticised for failing to prepare graduates for the workforce by focusing too heavily on academic knowledge and technical skills while neglecting generic skills. The findings from a VetFutures survey conducted in the United Kingdom in 2015 found that only 23% of students and graduates felt that their veterinary degree had prepared them or was preparing them 'very well' for the work they hoped to undertake (BVA 2015). Such results point to an urgent need to refocus some aspects of veterinary education. There is a need for a robust teaching system that equips veterinary students to juggle conflicting stakeholder needs by considering situations from the viewpoints of all parties involved and recognising the risks and benefits of all the decisions they subsequently make (Armitage-Chan and Whiting 2016).

### **8.4. Personal reflections on the strengths and limitations of this study**

This journey of exploration represented the first time that the opinions of multiple veterinary stakeholders on the attributes of professionalism important to the veterinary profession have been solicited in one series of research studies.

I am a veterinary practitioner in New Zealand (NZ) and a Senior Lecturer at Massey University. This made me familiar with the language used in survey responses, focus groups and critical incident interviews. I also knew most of the students and many of the veterinarians that I interviewed. This facilitated a relaxed and open atmosphere during the focus groups and the critical incident interviews. In addition, this research required a thorough literature review on the definition of veterinary professionalism and positioned me as the 'expert' in veterinary professionalism.

Together, these factors had the potential to influence the responses of student and veterinarian participants, and to affect my interpretation of the data. These

considerations are inherent in qualitative research and were addressed in the application for Human Ethics Committee approval to undertake the studies, and in planning the study in collaboration with peers and academic supervisors. The importance of 'bracketing' or 'containing' the researcher's personal experience when interpreting the data has been emphasised by Dowding *et al.* (2011), among others. Minimising bias required taking care to conduct the studies openly and honestly, to interpret the results in an open and transparent manner with reference to theoretical frameworks built on previous research, and to ensure the research was rigorous and systematic. Additional safeguards were ensured through the supervision process. Analyses of the qualitative data were reviewed and cross-checked by peers and doctoral supervisors. Whilst supervisor and peer review highlighted some differences of interpretation, these were invariably minor enough to indicate that there was no evidence of systematic errors on my part.

The possibility of an 'experimenter effect' also had to be considered as I was the current lecturer of the veterinary students and had taught many of the younger veterinarians when they were undergraduate students. Participants were assured that their responses to the survey and card-sort exercise were anonymous and they could not be linked to their responses.

For the final year student focus groups, it was also important to account for the Hawthorne effect. This effect describes the phenomenon of participants modifying their behaviour and opinions in response to their awareness of being observed (McCambridge *et al.* 2014). Because the focus groups involved face-to-face interactions between the students and myself as the facilitator, students may have provided the answers that they thought I would want to hear. Nonetheless, given the depth, detail and richness of the discussions, I and my supervisors feel confident that students felt able to discuss issues freely, including those of a sensitive or personal nature.

Participant demographics in each of the cohorts were diverse, indicating that the studies had the potential to identify the viewpoints of participants from a range of ages, genders and ethnic backgrounds. Sampling appeared to be adequate as the attributes that seemed of importance to students and veterinarians were able

to be captured in the TA framework and there was considerable agreement between the groups, and between the study findings and previous literature.

It is, however, important to acknowledge that the analyses and conclusions represent my personal interpretation of the data. The credibility of the findings has, however, been strengthened by the following actions: (1) presenting direct quotes (lowest inference descriptors) from the transcripts, in order to minimise the risk of my interpretation of the data being imposed upon the reader; (2) coding large numbers of different potential themes in all transcripts before looking for commonalities and patterns and then consolidating these themes based on frequency, similarity and emphasis given; and (3) getting two co-researchers, with differing levels of experience, to also analyse the data.

The balance between the search for emergent themes and the application of existing knowledge has caused tension in GT research (Kennedy and Lingard 2006). The degree to which GT researchers should avoid being influenced by previous relevant research remains an area of debate. Opinions have ranged from the position that grounded theorists should acknowledge the influences of prior relevant work on their analytical perspective, to the suggestion that a literature review should not even be performed until the final stages of data analysis (Reyes 2018). The approach adopted in the present study could be termed a dual analytical process, in which attention was paid to both pre-existing themes derived from previous research and emergent themes derived from the current data (Kennedy and Lingard 2006). This dual process allowed me to explore emergent issues while building a framework that could span both emergent themes and those identified from previous research. Nonetheless, it was important for me to suspend my prejudgements and preconceptions regarding the phenomenon of veterinary professionalism to be able to gain an unbiased understanding of the participants' responses.

Although the present studies found no differences that could be attributed to gender or ethnic background in the first year and final year veterinary students, both student cohorts included a substantially higher number of women than men, and a higher number of NZ European students than students from other ethnic

backgrounds. Although in these respects the samples were representative of the population of undergraduate veterinary students, caution should be employed when generalising the findings to male students and students from minority ethnicities.

In Chapter 6, participants in the critical incident technique (CIT) study were required to report incidents that had happened in the past (one veterinarian related a negative critical incident that had occurred over 20 years previously). While participants may have had trouble recalling events in accurate and complete detail, Vianden (2012) maintains that critical incidents are those which create memorable impressions and which participants recall vividly, often experiencing powerful emotions during the narration. In this study, many of the participants cried openly while narrating negative critical incidents even though the incident had occurred many years previously, suggesting that incidents were remembered vividly and recounted in considerable detail.

To avoid the risk of mis-coding critical incident narratives, it was important to follow each of Flanagan's pre-established steps for conducting a CIT study as outlined in Chapter 3. Faithful adherence to these steps ensured the credibility and transferability of these results to other studies with similar aims (Reyes 2018). Furthermore, the two other co-researchers (mentioned above) undertook concurrent and independent TA of the data, resulting in the coding categories being based on high levels of inter-rater agreement.

The ethical external validity of the research, that considers how the findings can improve the lives of the subjects studied (Allen 2014), was also considered. An example of the ethical external validity inherent in this study was during the critical incident interview process, reported in Chapter 6. For some participants, the opportunity to narrate to me their positive and negative critical incidents seemed to bring them a degree of comfort and occasionally closure. The ethical external validity of my research also considered how my findings could be applied to veterinary education. By determining veterinary professionalism attributes that veterinary stakeholders deemed important for career success, the research findings can hopefully be applied to improving the veterinary undergraduate

professionalism curriculum at Massey University. This would benefit the students by better equipping them for success in their future veterinary careers.

### **8.5. Directions for future research**

Future research could utilise a similar range of techniques to explore perceptions of veterinary professional attributes at other veterinary schools internationally. This, along with a broader understanding of effective methods of teaching and learning veterinary professionalism, could support the extrapolation of findings to other veterinary training institutes. Collaborative research could ultimately contribute towards the international benchmarking of veterinary professionalism curricula.

Additional research could explore the perceptions of teaching staff, especially clinical instructors, as teachers' opinions might help triangulate students' opinions. Further exploration of appropriate teaching formats for veterinary professionalism is also required. The types of pedagogy and assessment that are suitable for veterinary professionalism represent a new direction for future research. While formative and summative assessment techniques can test whether learning outcomes have been met, it is noteworthy that students in this current study insisted that their motivation for developing veterinary professionalism during undergraduate training was to become competent veterinarians and not to pass examinations.

Data from veterinarians and client complaints came only from NZ and, in the case of practitioners, only from those in private practice. More information is needed on professionalism as seen by practitioners in teaching, welfare or government agency positions. Whether a future study of veterinarians from a broader base of employment, or from different geographical or socioeconomic regions would have highlighted different themes amongst respondents' critical incidents remains to be seen.

## 8.6. Conclusions

An important aim of this project was to create an evidence-based model or framework of veterinary professionalism that would be useful for the veterinary profession. By presenting and describing the framework, it is hoped that veterinarians and veterinary educators may be able to use it as a guide in the practice of veterinary medicine, in their relationships with patients, clients, colleagues and society, and in veterinary education.

Furthermore, adopting a model that helps to define the aspects of professionalism can help form the basis for constructing a sound framework for teaching and assessment. By determining veterinary professionalism attributes that stakeholders deemed important for career success, the research findings can hopefully be applied to improving the veterinary undergraduate professionalism curriculum at Massey University. This would benefit the students by better equipping them for success in their future veterinary careers. While a veterinary degree may not guarantee employment, the elements of veterinary undergraduate education should enable students to gain mastery in attributes of professionalism that are considered essential for employability. The curriculum may assist graduates to gain employment, but it is their levels of professionalism that will determine the success of their careers (Farias 2016). Humble (2001) has underscored the importance of veterinary schools acting as 'nurseries' that advocate and cultivate professionalism among their students so that they may graduate and embrace their new careers with a 'passion for excellence'.

Finally, the findings of this thesis will hopefully initiate further discourse in veterinary professionalism and ensure that the concept of professionalism remains a priority within the profession as it evolves to meet society's shifting expectations and the constantly changing work environment.



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## Appendices

**Appendix 4.A:** The veterinary professionalism attributes shown on the first year veterinary students' capability framework cards.

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### **Self-oriented attributes**

1. Self-management - Takes responsibility and is open to development
2. Self-management - Remains composed under pressure and recovers quickly from setbacks
3. Drive and commitment - Shows enthusiasm, determination and resilience
4. Creativity - Comes up with a lot of new and unique ideas and easily makes connections among previously unrelated notions.
5. Adapts to change - Recognises the opportunities that change presents. Adapts and responds positively to change.
6. Develops own expertise - Eager to engage in learning experiences and build expertise.
7. Develops Own Expertise - Learns through self-reflection and analysing success and failures.
8. Self-Development - Is personally committed to and actively works to continuously improve him/herself; works to utilise strengths; works on compensating for weaknesses and limitations.
9. Self-Knowledge - Knows personal strengths, weaknesses, opportunities, and limits; gains insights from mistakes.
10. Self-Knowledge - Seeks feedback; is open to criticism; isn't defensive; is receptive to talking about shortcomings.
11. Personal Disclosure - Shares his/her thoughts about personal strengths, weaknesses, and limitations; admits mistakes and shortcomings; is open about personal beliefs and feelings.
12. Humour - Has a positive and constructive sense of humour; can laugh at him/herself and with others; is appropriately funny.
13. Integrity and Trust - Is widely trusted; is seen as a direct, truthful individual; keeps confidences and admits mistakes.
14. Integrity and Trust - Can present the unvarnished truth in an appropriate and helpful manner.
15. Work/Life Balance - Maintains a conscious balance between work and personal life so that one doesn't dominate the other; knows how to attend to both; gets what he/she wants from both.
16. Acting with Integrity - Builds trust with others by being fair and open in their dealings, being consistent in their actions and maintaining confidentiality.
17. Ethics and Values - Adheres to an appropriate (for the setting) and effective set of core values and beliefs; acts in line with those values during both good and bad times; practices what he/she preaches.
18. Leading - Steps up to challenges, demonstrates commitment to their work; is a role model to others. Provides guidance formally and informally.
19. Patience - Is tolerant with people and processes; listens and checks before acting; tries to understand the people and the data before making judgments and acting.

### **Task-oriented attributes**

20. Action oriented - Takes responsibility for own work, recognises opportunities and acts with a minimum of direction.
21. Drive and Commitment - Works to a high standard and achieves results.
22. Problem Solving - Uses rigorous logic and methods to solve difficult problems with effective solutions; probes all fruitful sources for answers; looks beyond the obvious and doesn't stop at the first answers.
23. Research and Analysis - Gathers and analyses information to determine relationships, patterns, causes and effects. Identifies options and reaches rational conclusions.
24. Judgement and Decision Making - Makes timely decisions taking into account the wider context and likely consequences.
25. Innovation - Produces new ideas and offers insights or builds on others' ideas. Initiates new approaches to improve work practices.
26. Organising - Can marshal resources (people, funding, material, support) to get things done; can orchestrate multiple activities at once to accomplish a goal.
27. Planning and Organising - Works in an organised and methodical manner to deliver results.
28. Planning and Organising - Accurately scopes out length and difficulty of tasks and projects.



- 29. Planning and Organising - Sets objectives and goals; breaks down work into the process steps; develops schedules.
- 30. Planning and Organising - Measures performance against goals; evaluates results.
- 31. Priority Setting - Spends his/her time and the time of others on what's important; can quickly sense what will help or hinder accomplishing a goal; eliminates roadblocks.
- 32. Time Management - Uses his/her time effectively and efficiently and values time; concentrates his/her efforts on the more important priorities.
- 33. Following Instructions and Procedures - Recognises and respects the need for and relevance of policies, procedures and management.
- 34. Business Acumen - Knows how veterinary businesses work and is knowledgeable in current and possible future policies, practices, trends, technology, and information affecting his/her veterinary organisation.
- 35. Business Acumen - Knows the veterinary marketplace and is aware of marketing strategies.
- 36. Presentation Skills - Is effective in a variety of formal presentation settings; commands attention and can manage group process during the presentation; can change tactics midstream when something is not working.

### **People-oriented attributes**

- 37. Communication Skills - Expresses opinions, concepts and information in an uncomplicated manner using communication styles to suit the audience; can get messages across that have the desired effect.
- 38. Conflict Management - Steps up to conflicts and sees them as opportunities.
- 39. Conflict Management - Reads situations quickly and is good at focused listening.
- 40. Conflict Management - Can find common ground and get co-operation with minimum fuss.
- 41. Managing Diversity - Deals effectively with all races, nationalities, cultures, disabilities, ages and both sexes; supports equal and fair treatment and opportunity for all.
- 42. Collaboration - Works openly and harmoniously within teams and with others outside their area.
- 43. Collaboration - Shares knowledge and ideas. Shows consideration and respect for others, valuing the different perspectives they bring to their work.
- 44. Motivating Others - Creates a climate in which people want to do their best; can motivate team or project members.
- 45. Motivating Others - Empowers others; invites input from each person and shares ownership and visibility; makes each individual feel his/her work is important.
- 46. Building Relationships - Projects credibility and builds rapport to establish effective working relationships with others.
- 47. Building Relationships - Manages differences of opinion with tact and diplomacy.
- 48. Compassion - Genuinely cares about people and is concerned about their work and non-work problems; demonstrates real empathy with the joys and pains of others.
- 49. Influencing - Gains agreement and commitment from others. Persuades and negotiates in a positive manner to achieve shared goals.
- 50. Listening - Practices attentive and active listening; has the patience to hear people out.
- 51. Listening - Can accurately restate the opinions of others even when he/she disagrees.
- 52. Negotiating - Can negotiate skillfully in tough situations; can settle differences without damaging relationships.
- 53. Negotiating - Can be direct and forceful as well as diplomatic; gains trust quickly of other parties to the negotiations.
- 54. Peer Relationships - Can quickly find common ground and solve problems for the good of all; can solve problems with peers.
- 55. Peer Relationships - Is seen as a team player and is cooperative; easily gains trust and support of peers; encourages collaboration; can be candid with peers.
- 56. Client Focus - Works to a high standard and always looks for ways to deliver better value to the client.
- 57. Client Focus - Establishes and maintains effective relationships with clients and gains their trust and respect.

**Appendix 4.B:** The measures of central tendencies and percentage responses for first year students for the 57 self/task/people-oriented veterinary professionalism attributes for 2014-2016.

Attribute	N	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less Relevant	Irrelevant
<b>Summary statistics for the Self-oriented veterinary professionalism attributes</b>								
1. Self-Management - Takes responsibility and is open to development.	315	3.66	0.555	4	69	28	2	1
2. Self-Management - Remains composed under pressure and recovers quickly from setbacks.	316	3.82	0.429	4	84	14	2	0
3. Drive and Commitment - Shows enthusiasm, determination and resilience.	315	3.27	0.593	3	35	57	8	0
4. Creativity - Comes up with a lot of new and unique ideas and easily makes connections among previously unrelated notions.	316	2.44	0.666	2	5	38	53	4
5. Adapts to Change - Recognises the opportunities that change presents. Adapts and responds positively to change.	314	3.08	0.632	3	24	60	16	0
6. Develops Own Expertise - Eager to engage in learning experiences and build expertise.	316	3.38	0.634	3	46	46	8	0
7. Develops Own Expertise - Learns through self-reflection and analysing success and failures.	316	3.19	0.750	3	39	42	18	1
8. Self-Development - Is personally committed to and actively works to continuously improve him/herself; works to utilise strengths; works on compensating for weaknesses and limitations.	316	3.31	0.662	3	41	49	8	1
9. Self-Knowledge - Knows personal strengths, weaknesses, opportunities, and limits; gains insights from mistakes.	314	3.28	0.658	3	39	49	11	0
10. Self-Knowledge - Seeks feedback; is open to criticism; isn't defensive; is receptive to talking about shortcomings.	315	3.22	0.638	3	33	56	11	0

Attribute	N	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less Relevant	Irrelevant
11. Personal Disclosure - Shares his/her thoughts about personal strengths, weaknesses, and limitations; admits mistakes and shortcomings; is open about personal beliefs and feelings.	316	2.26	0.773	2	5	30	50	15
12. Humour - Has a positive and constructive sense of humour; can laugh at him/herself and with others; is appropriately funny.	316	2.15	0.759	2	3	27	51	19
13. Integrity and Trust - Is widely trusted; is seen as a direct, truthful individual; keeps confidences and admits mistakes.	316	3.68	0.566	4	73	22	5	0
14. Integrity and Trust - Can present the unvarnished truth in an appropriate and helpful manner.	314	3.46	0.674	4	56	33	10	0
15. Work/Life Balance - Maintains a conscious balance between work and personal life so that one doesn't dominate the other; knows how to attend to both; gets what he/she wants from both.	314	3.07	0.791	3	32	44	21	2
16. Acting with Integrity - Builds trust with others by being fair and open in their dealings, being consistent in their actions and maintaining confidentiality.	316	3.68	0.571	4	73	22	4	0
17. Ethics and Values - Adheres to an appropriate (for the setting) and effective set of core values and beliefs; acts in line with those values during both good and bad times; practices what he/she preaches.	316	3.27	0.825	3	49	32	16	3
18. Leading - Steps up to challenges, demonstrates commitment to their work; is a role model to others. Provides guidance formally and informally.	314	2.87	0.702	3	18	50	31	0
19. Patience - Is tolerant with people and processes; listens and checks before acting; tries to understand the people and the data before making judgments and acting.	315	3.65	0.527	4	68	30	3	0
<b>Summary statistics for the Task-oriented veterinary professionalism attributes</b>								
20. Action oriented - Takes responsibility for own work, recognises opportunities and acts with a minimum of direction.	315	3.12	0.747	3	32	50	15	3

Attribute	N	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less Relevant	Irrelevant
21. Drive and Commitment - Works to a high standard and achieves results.	314	3.57	0.585	4	61	34	4	0
22. Problem Solving - Uses rigorous logic and methods to solve difficult problems with effective solutions; probes all fruitful sources for answers; looks beyond the obvious and doesn't stop at the first answers.	315	3.40	0.686	4	51	39	10	1
23. Research and Analysis - Gathers and analyses information to determine relationships, patterns, causes and effects. Identifies options and reaches rational conclusions.	315	3.20	0.845	3	45	33	19	3
24. Judgement and Decision Making - Makes timely decisions taking into account the wider context and likely consequences.	316	3.54	0.608	4	59	35	5	0
25. Innovation - Produces new ideas and offers insights or builds on others' ideas. Initiates new approaches to improve work practices.	315	2.49	0.665	2	5	44	46	5
26. Organising - Can marshal resources (people, funding, material, support) to get things done; can orchestrate multiple activities at once to accomplish a goal.	316	2.61	0.783	3	14	39	43	5
27. Planning and Organising - Works in an organised and methodical manner to deliver results.	315	2.98	0.738	3	24	51	22	2
28. Planning and Organising - Accurately scopes out length and difficulty of tasks and projects.	316	2.55	0.777	2	12	37	45	6
29. Planning and Organising - Sets objectives and goals; breaks down work into the process steps; develops schedules.	316	2.61	0.728	3	11	44	42	4
30. Planning and Organising - Measures performance against goals; evaluates results.	315	2.46	0.749	2	9	36	49	7
31. Priority Setting - Spends his/her time and the time of others on what's important; can quickly sense what will help or hinder accomplishing a goal; eliminates roadblocks.	316	3.05	0.781	3	30	47	21	3

Attribute	N	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less Relevant	Irrelevant
32. Time Management - Uses his/her time effectively and efficiently and values time; concentrates his/her efforts on the more important priorities.	315	3.43	0.676	4	52	41	6	2
33. Following Instructions and Procedures - Recognises and respects the need for and relevance of policies, procedures and management.	316	3.41	0.761	4	57	27	15	1
34. Business Acumen - Knows how veterinary businesses work and is knowledgeable in current and possible future policies, practices, trends, technology, and information affecting his/her veterinary organisation.	316	3.33	0.743	3	49	36	15	1
35. Business Acumen - Knows the veterinary marketplace and is aware of marketing strategies.	314	2.46	0.783	2	9	38	44	9
36. Presentation Skills - Is effective in a variety of formal presentation settings; commands attention and can manage group process during the presentation; can change tactics midstream when something is not working.	315	2.36	0.759	2	8	29	54	9
<b>Summary statistics for the people-oriented veterinary professionalism attributes</b>								
37. Communication Skills - Expresses opinions, concepts and information in an uncomplicated manner using communication styles to suit the audience; can get messages across that have the desired effect.	315	3.63	0.621	4	70	23	7	0
38. Conflict Management - Steps up to conflicts and sees them as opportunities.	315	2.30	0.794	2	7	30	49	14
39. Conflict Management - Reads situations quickly and is good at focused listening.	316	3.26	0.745	3	42	43	13	2
40. Conflict Management - Can find common ground and get cooperation with minimum fuss	289	2.94	0.791	3	25	47	25	3
41. Managing Diversity - Deals effectively with all races, nationalities, cultures, disabilities, ages and both sexes; supports equal and fair treatment and opportunity for all.	315	3.64	0.640	4	72	20	7	1

Attribute	N	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less Relevant	Irrelevant
42. Collaboration - Works openly and harmoniously within teams and with others outside their area.	315	3.39	0.655	3	48	44	8	1
43. Collaboration - Shares knowledge and ideas. Shows consideration and respect for others, valuing the different perspectives they bring to their work.	316	3.26	0.688	3	40	46	14	0
44. Motivating Others - Creates a climate in which people want to do their best; can motivate team or project members.	314	2.69	0.695	3	11	49	38	2
45. Motivating Others - Empowers others; invites input from each person and shares ownership and visibility; makes each individual feel his/her work is important.	316	2.69	0.743	3	14	44	40	3
46. Building Relationships - Projects credibility and builds rapport to establish effective working relationships with others.	315	3.23	0.720	3	39	46	14	1
47. Building Relationships - Manages differences of opinion with tact and diplomacy.	311	3.04	0.792	3	31	43	24	2
48. Compassion - Genuinely cares about people and is concerned about their work and non-work problems; demonstrates real empathy with the joys and pains of others.	315	3.11	0.802	3	37	40	21	2
49. Influencing - Gains agreement and commitment from others. Persuades and negotiates in a positive manner to achieve shared goals.	315	2.67	0.769	3	13	45	36	5
50. Listening - Practices attentive and active listening; has the patience to hear people out.	316	3.55	0.638	4	63	29	8	0
51. Listening - Can accurately restate the opinions of others even when he/she disagrees.	315	2.75	0.911	3	25	33	35	7
52. Negotiating - Can negotiate skillfully in tough situations; can settle differences without damaging relationships.	315	3.18	0.793	3	40	42	16	3

Attribute	N	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less Relevant	Irrelevant
53. Negotiating - Can be direct and forceful as well as diplomatic; gains trust quickly of other parties to the negotiations.	315	2.81	0.835	3	22	41	32	5
54. Peer Relationships - Can quickly find common ground and solve problems for the good of all; can solve problems with peers.	315	3.00	0.786	3	29	45	24	2
55. Peer Relationships - Is seen as a team player and is cooperative; easily gains trust and support of peers; encourages collaboration; can be candid with peers.	316	3.14	0.774	3	37	42	20	1
56. Client Focus - Works to a high standard and always looks for ways to deliver better value to the client.	315	3.58	0.631	4	65	29	6	1
57. Client Focus - Establishes and maintains effective relationships with clients and gains their trust and respect.	316	3.84	0.417	4	85	14	0	1

**Appendix 4.C:** Post hoc comparisons of the median scores for first year veterinary student responses to the self-oriented attributes, the task-oriented attributes, and the people-oriented attributes to determine which of the three years (2014, 2015 and 2016) differed from each other.

Domains	Year	Year	Significance
<b>Self-oriented attributes</b>	2014	2015	0.339
		2016	0.001*
	2015	2014	0.339
		2016	0.021**
	2016	2014	0.001*
		2015	0.021**
<b>Task-oriented attributes</b>	2014	2015	0.486
		2016	0.000*
	2015	2014	0.486
		2016	0.000*
	2016	2014	0.000*
		2015	0.000*
<b>People-oriented attributes</b>	2014	2015	0.007*
		2016	0.000*
	2015	2014	0.007*
		2016	0.000*
	2016	2014	0.000*
		2015	0.000*
*p<0.01; **p<0.05			



**Appendix 5.A:** Survey used to solicit final year veterinary students' perceptions of important veterinary professionalism attributes and their opinions on the suitability of the veterinary professionalism training course at Massey University.

The purpose of this online survey is to collect your opinions on the importance of professional attributes towards veterinary career success. Your opinion is valuable as you have gained clinical experience in the veterinary teaching hospital and in external private practice placements.

Furthermore, you have developed an insight into professional values through the current undergraduate professional skills training programme and through the experience of interacting with clinicians who are demonstrating role-modelling in professionalism. Your opinion on the current undergraduate professional skills training programme will also be solicited. Thank you for your participation.

We'd like to collect some basic demographic data from you to stratify against the class opinions.

1. What is your gender?    Male            Female            Prefer not to respond
  
2. What is your ethnicity?    Māori            NZ European    Pasifika            Asian            Other
  
3. What is your age?            20 – 25        26 – 30            31 – 35            36 – 40        > 40
  
4. How important do you think it is to include a veterinary professional competence training programme as part of veterinary education?  
     Essential                      Important                      Neither important or not important  
     Not very important            Not at all important
  
5. Please identify each **self-development** veterinary professional attribute as:
 

<ul style="list-style-type: none"> <li>• Irrelevant to veterinary career success</li> <li>• Relevant to career success</li> </ul>	<ul style="list-style-type: none"> <li>• Less relevant to career success</li> <li>• Essential to career success</li> </ul>
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<ul style="list-style-type: none"> <li>• Remain composed under pressure and cope with adversity</li> <li>• Recover quickly from setbacks</li> <li>• Self-regulate emotional responses</li> <li>• Take a balanced view of own strengths, weaknesses and limitations</li> <li>• Admit mistakes and shortcomings</li> <li>• Engage in reflective practice and learn from experience</li> <li>• Adapt and respond positively to change</li> <li>• Engage in learning experiences and build expertise</li> <li>• Create new and unique ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Make connections among previously unrelated notions</li> <li>• Utilise strategies to navigate challenges and maintain wellbeing</li> <li>• Remain open to criticism without being defensive Adhere to an appropriate (for the context) and effective set of core values and beliefs</li> <li>• Maintain a positive and constructive sense of humour</li> <li>• Maintain confidentiality</li> <li>• Maintain a conscious balance between work and personal life</li> <li>• Act as a role model to others</li> <li>• Provide guidance formally and informally</li> </ul>
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6. Please identify each **task-orientated** veterinary professional attribute as:
 

<ul style="list-style-type: none"> <li>• Irrelevant to veterinary career success</li> <li>• Relevant to career success</li> </ul>	<ul style="list-style-type: none"> <li>• Less relevant to career success</li> <li>• Essential to career success</li> </ul>
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The current veterinary professional competence training programme:

12. Please provide feedback on the suitability of the current BVSc professional competency training programme by indicating your level of agreement with the following statements:

Strongly disagree      Disagree      Agree      Strongly agree

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• The first year veterinary professional competence course (227.114) acts as a good introduction to veterinary professional competency</li><li>• The current veterinary professional competence programme covers all of the essential veterinary professional attributes</li><li>• The veterinary professional competence programme is well represented in each year of the veterinary undergraduate programme</li></ul> | <ul style="list-style-type: none"><li>• The veterinary professional competence programme is well integrated into other veterinary courses within the veterinary undergraduate programme</li><li>• The veterinary professional competence programme adequately prepares a student for professional interactions with clients and clinical staff members during the final year clinical rotations and external clinical placements</li></ul> |
|--|--|

Please feel free to add any comments

13. Which of the following teaching methods are appropriate formats to use for veterinary professional competence instruction (you may select more than one answer):

Lectures      Workshops      Tutorials      Scenario role plays  
Filmed simulated consultations      Other (please specify)

14. Please provide any suggestions which may help to improve the veterinary professionalism skills programme in the future

### Focus Group invitation

In order to gain more in-depth information about veterinary students' perceptions of veterinary professional skills, I am also carrying out some focus groups. The focus group would involve a round table discussion, consisting of 5-6 students and the principal researcher, and would be held in early November 2017.

If you would like to take part in the focus group, please contact Stuart Gordon using the following e-mail address: [S.J.G.Gordon@massey.ac.nz](mailto:S.J.G.Gordon@massey.ac.nz)

**Appendix 5.B:** The semi-structured script used to guide the final year focus groups.

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Thank you for offering to take part in this focus group; your point of view is very important and I realise you are busy, and I appreciate your time.

This focus group is about your perceptions, as final year veterinary science students, about the professional skills that are essential for veterinarians' career success. Later we will also talk about your views of the BVSc professional competence course.

This research is part of my PhD and the findings will also be used to help improve the veterinary professional competence curriculum.

The focus group discussions will be recorded. Recordings will be transcribed, and the transcriptions will not contain information that could identify you as participants. The original recordings will be securely stored and deleted when they are no longer required.

In a moment I'll ask each of you to sign a consent form and a confidentiality agreement. Do you have any questions?

We need to have some ground rules for the discussions.

- First, there are no right or wrong answers. I'm interested in your views and opinions.
- You do not have to speak in any particular order. When you have something to say, please do so as I'm interested in everyone's views.
- You don't have to agree with other people in the group, but please treat everyone with respect
- It's very important that only one person speaks at a time. Please wait until a speaker has finished before speaking up;

[raise your hand if you feel you want to say something but can't seem to get a word in?]

Are there any questions?

**OK I'm now going to turn the recorder on.**

**Before we get started, I would first like everyone to introduce themselves. Please tell us your first name and why you are here today (or one interesting thing about yourself).**

- My first, and broadest, question is: What veterinary professional skills do you think are essential for career success and why?
- How important do you think it is to include a veterinary professional competence training programme as part of veterinary education?
- Have your perceptions of essential veterinary professional attributes changed since first year? If so, please give examples and outline those factors that you feel have contributed to these changes in your perception?
  - Regarding the current BVSc professional competence training programme:
  - Do you think the first year veterinary professional competence course (227.114) provides a good introduction to the concept of veterinary professional competence?
  - Do you feel the current veterinary professional competence programme covers all of the professional attributes you have identified as essential?
  - Do you think the veterinary professional competence programme is well represented in each year of the veterinary undergraduate programme?

- Do you feel the veterinary professional competence programme is well integrated into other veterinary courses within the veterinary undergraduate programme?
- Do you feel the use of lectures, workshops and tutorials/ scenario role plays/ filmed simulated consultations are appropriate formats for veterinary professional competence instruction?
- Do you think the veterinary professional competence programme adequately prepares a student for professional interactions with clients and clinical staff members during the final year clinical rotations and external clinical placements?
- Do you feel that the final year clinical rotations and external clinical placements provide adequate opportunities for a student to demonstrate and reinforce veterinary professional competence skills?
- Related to your answers above, what do you feel are the current strengths (relating to content, structure, teaching methods etc.) of the veterinary professional competence course?
- Which areas of the veterinary professional competence course do you feel need further development?
- Please provide any suggestions which may help to improve the programme in the future.

### **Concluding question**

- Of all the things we've discussed today, what would you say are the most important issues you would like to express about essential veterinary professional skills for career success?

### **Conclusion**

- Thank you for participating. This has been a very successful discussion
- Your opinions will be a valuable asset to the study
- We hope you have found the discussion interesting

### **End recording**

**Appendix 5.C:** The information sheet provided to final year veterinary students as part of the human ethics application to run the online survey and to conduct the focus groups

**Final year veterinary students' perceptions of essential veterinary professional skills for career success**

**Stuart Gordon**

**August 2017**

**Aim:** To describe the perceptions of final year veterinary science students regarding their perceptions of essential veterinary professional skills for career success and their opinion on the current BVSC veterinary professional competency course.

The findings of this research will be used to continuously improve the veterinary professional competency course by incorporating student opinion as well as by considering gender and cultural issues related to these attributes.

**Background:** Epstein and Hundert (2002) describe 'Professional Competence' as a term which embraces both professionalism and professional skills. They define this competence as the judicious and habitual use of communication skills, clinical reasoning, values, emotions and reflection for the benefit of the community being served. Swick *et al.* (1999) focus on four key attributes, namely putting the interests of the clients/patients before one's own; maintaining high ethical and moral standards; responding appropriately to societal needs and adhering to core humanistic values such as altruism, integrity and empathy (Swick *et al.* 1999). Lewis and Klausner (2003) have identified the essential components of professional development training required to be included in an undergraduate veterinary curriculum. These include verbal and written communication, managing financial resources, managing interpersonal conflicts, personal wellbeing, professional ethics and leadership skills.

**Current structure of the Massey University veterinary undergraduate programme:**

Professional Development in the undergraduate veterinary curriculum is based on five major themes:

1. Veterinary communication skills.
2. Personal physical and mental wellbeing.
3. Clinical reasoning.
4. Practice management and business and entrepreneurship skills.
5. Professional ethics and veterinary governance.

These can be depicted as a Roman temple. The overall umbrella (roof) of professional competence is supported by four important pillars of professionalism (Personal wellbeing; Clinical reasoning; Business skills and Ethics and governance) while Communication skills form the foundation of the temple upon which all professional competence is built:



The additional qualities of professionalism such as altruism, integrity and empathy are woven throughout these themes across all semesters of undergraduate study.

### **Participant Identification and Recruitment:**

The final year BVSC class of 2017 at Massey University will be surveyed using a Survey Monkey questionnaire. This questionnaire will be distributed to all final year students (N=95) online during the 2017 academic year. Data will also be collected on the student's gender, age and ethnicity which will provide information on whether student perception on what constitutes essential veterinary professional and personal skills varies according to age, gender and ethnic background. This will provide an opportunity to ensure that specific professional and personal skills training, regarded as vital by certain ethnic student groups, are provided in the veterinary professional and personal skills undergraduate curriculum. Ethnicity categories will be chosen according to Statistics New Zealand Tatauranga Aotearoa (2013) which includes: European, Māori, Asian, Pacific People and Middle Eastern/Latin American/African.

The focus groups will be conducted by the principal applicant, Stuart Gordon. The Privacy Act of New Zealand allows for personal information to be used for research purposes provided that the participants are providing this information voluntarily and that it will be anonymised (both participants and any people referred to in the focus group) before publication. The focus groups will be recorded and transcribed with the transcripts anonymised. In addition, a confidentiality agreement and consent form, between the principal researcher/facilitator and each participant, will be signed.

**Please note that participation in the questionnaire or focus group is completely voluntary and you will in no way be prejudiced by non-participation. There will be no disadvantage to those students who choose not to participate**

### **Conflict of Interest Issues:**

I am acting as a researcher but am also one of your 227.511 lecturers/instructors, so this may be considered a conflict of interest. To minimise this conflict the survey is to be facilitated by a neutral person, Dr Charlotte Bolwell, who is not a veterinarian and is completely uninvolved in the BVSC V programme. The online questionnaire is to be filled out anonymously and participation is voluntary. Dr Bolwell will take responsibility for collating your responses. Collation of the results will allow all individual responses to be combined so that only the overall class responses are displayed. I will have no knowledge about which students have participated and about how each individual student responded.

Furthermore, participation in the focus group is entirely voluntary.

All student assessment in 227.511 is subject to scrutiny and ratification by all members of the Faculty so the opportunity for impropriety is negligible.

### **Data Management:**

Data will be stored on password protected computers and will not be identifiable back to the original participants. The findings of the research will be discussed with the participant class, and when the study is concluded a summary of the results will be made available on the University's IT teaching platform. It is anticipated that the research findings will be presented locally to interested university parties, at a conference, and in peer reviewed and non-peer reviewed publications.

### **Participant's Rights:**

Please note that you are under no obligation to accept this invitation. If you decide to participate you have the right to:

- decline to complete a particular section of the online questionnaire
- leave the focus group at any time

- decline to answer any particular question
- ask any questions about the study at any time during participation
- provide information on the understanding that your name will not be used unless you give permission to the researcher
- be given access to a summary of the project findings when it is concluded

Please note that completion and return of the questionnaire implies consent although you have the right to decline to answer any particular question or complete a particular section of the online questionnaire. The researchers will have no access to your personal log-in detail and therefore your responses will be completely anonymous. The researchers will have no access to your personal log-in details and to individual responses.

You will be required to complete a consent form if you wish to participate in the focus group.

### **MUHEC Committee Approval Statement:**

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 17/31. If you have any concerns about the conduct of this research, please contact Dr Rochelle Stewart-Withers, Chair, Massey University Human Ethics Committee: Southern B, telephone 06 356 9099 x 83657, email [humanethicsouthb@massey.ac.nz](mailto:humanethicsouthb@massey.ac.nz)

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- Epstein R and Hundert E. 2002. Defining and Assessing Professional Competence. *J Am Vet Med Assoc*, 287(2), 226-235.
- Lewis RE, Klausner JS. Nontechnical competencies underlying career success as a veterinarian. 2003;222:1690–6. doi:10.2460/javma.2003.222.1690
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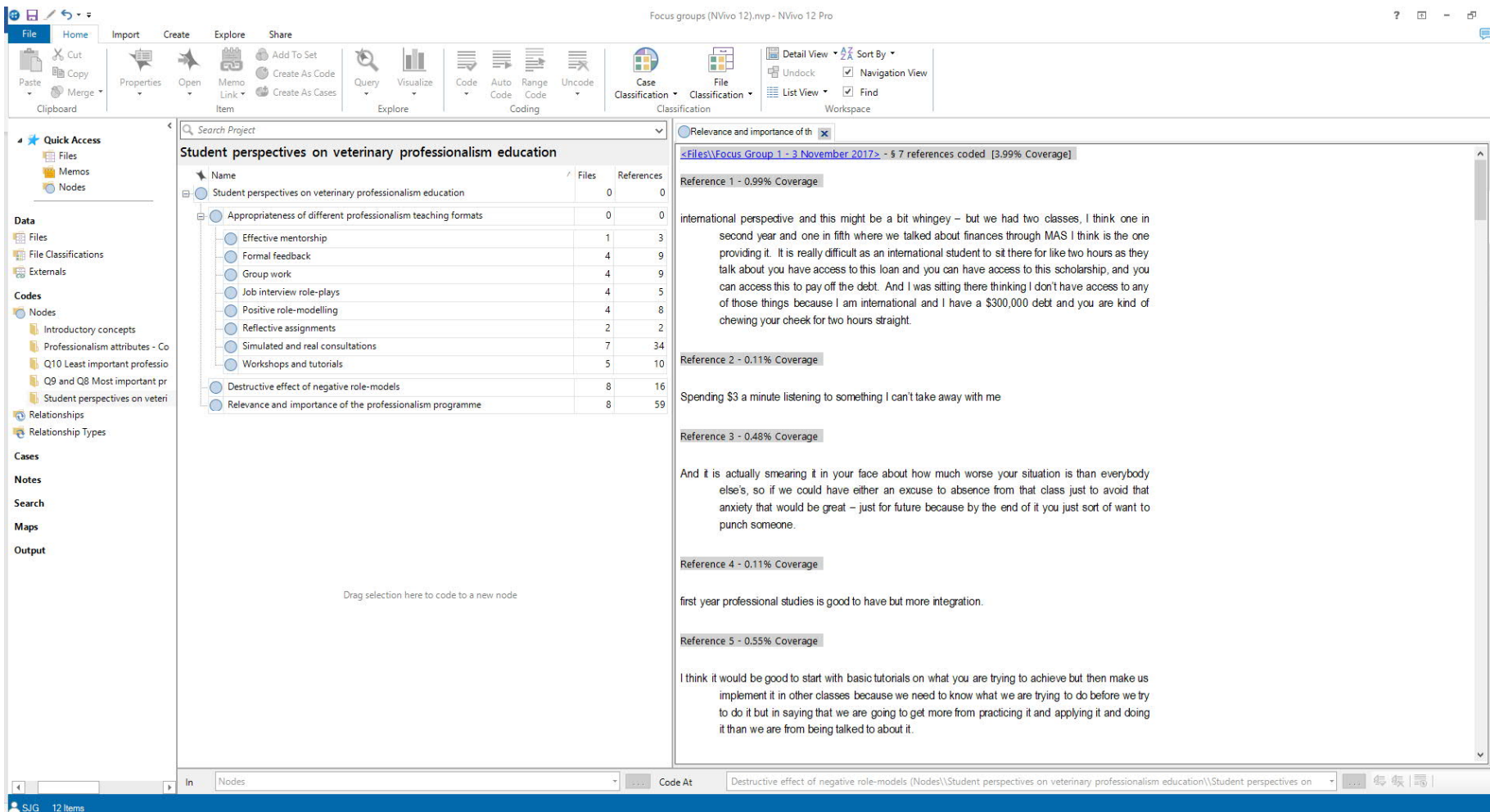


**Appendix 5.D:** A screen shot of the NVivo page showing the major themes and minor themes developed from thematic analysis of transcripts of final year veterinary students' focus groups that discussed important veterinary professionalism attributes for career success.

The screenshot displays the NVivo 12 Pro interface for a project titled 'Focus groups (NVivo 12).nvp'. The main window shows a list of 'Professionalism attributes' organized into a tree view on the left and a data table on the right. The table columns are: Name, Files, References, Created On, Created By, Modified On, and Modified By. The 'Professionalism attributes' are grouped into three main categories: 'Committing to personal wellbeing', 'Communicating with the client and building rapport', and 'Demonstrating accountability and integrity'. Each category contains several sub-attributes, such as 'Demonstrating collegiality and effective teamwork' and 'Accepting and admitting mistakes'. The 'References' column shows the number of references for each attribute, and the 'Created On' and 'Modified On' columns show the dates and times of creation and modification, along with the user who performed the action.

Name	Files	References	Created On	Created By	Modified On	Modified By
Committing to personal wellbeing		1	12/12/2018 1:31 PM	SIGG	23/10/2019 9:37 AM	SJG
Demonstrating collegiality and effective teamwork		6	4/01/2019 11:10 AM	SIGG	20/12/2019 2:45 PM	SJG
Possessing self-awareness and self-regulation		4	23/01/2018 1:50 PM	SJG	20/05/2020 3:54 PM	SJG
Engaging in reflective practice		5	5/12/2017 1:32 PM	SIGG	19/12/2019 6:39 AM	SJG
Enjoying self-confidence		4	6/12/2017 9:56 AM	SIGG	20/12/2019 1:08 PM	SJG
Maintaining a positive attitude and sense of humour		4	5/12/2017 1:32 PM	SIGG	18/12/2019 11:25 AM	SJG
Maintaining an optimum work-life balance		8	23/01/2018 1:45 PM	SJG	20/12/2019 1:10 PM	SJG
Possessing resilience		6	5/12/2017 2:19 PM	SIGG	21/10/2019 9:25 AM	SJG
Showing adaptability		4	5/12/2017 2:22 PM	SIGG	16/12/2019 5:35 PM	SJG
Communicating with the client and building rapport		0	5/12/2017 1:16 PM	SIGG	23/10/2019 9:34 AM	SJG
Accounting for client diversity		2	1/07/2019 3:22 PM	SIGG	11/11/2019 3:09 PM	SJG
Acknowledging the human-animal bond		3	4/5/2017 1:16 PM	SIGG	3/01/2019 11:35 AM	SIGG
Affording the client courtesy and respect		4	23/01/2018 1:55 PM	SJG	11/11/2019 2:07 PM	SJG
Demonstrating reflective listening		4	23/01/2018 3:15 PM	SJG	22/10/2019 11:10 AM	SJG
Displaying appropriate non-verbal behaviour		5	23/01/2018 3:14 PM	SJG	1/07/2019 3:30 PM	SIGG
Displaying empathy towards the client		6	23/01/2018 1:38 PM	SJG	17/12/2019 12:46 PM	SJG
Providing clear explanations to the client		6	23/01/2018 1:48 PM	SJG	27/01/2020 9:37 AM	SJG
Resolving disputes with the client amicably		3	23/01/2018 1:53 PM	SJG	23/10/2019 9:34 AM	SJG
Demonstrating accountability and integrity		0	12/12/2018 1:51 PM	SIGG	27/01/2020 11:55 AM	SJG
Accepting and admitting mistakes		2	23/01/2018 3:32 PM	SJG	23/10/2019 9:42 AM	SJG
Accepting responsibility for actions		2	6/12/2017 10:06 AM	SIGG	16/12/2019 2:28 PM	SJG
Charging fairly and appropriately		4	12/12/2018 1:51 PM	SIGG	11/11/2019 12:43 PM	SJG
Committing to life-long learning		3	18/01/2018 1:57 PM	SJG	20/12/2019 2:45 PM	SJG
Possessing an entrepreneurial spirit		7	5/12/2017 2:37 PM	SIGG	20/05/2020 3:53 PM	SJG
Managing time effectively		6	5/12/2017 1:19 PM	SIGG	23/10/2019 9:50 AM	SJG

**Appendix 5.E:** A screen shot of the NVivo page showing the major themes developed from thematic analysis of transcripts of final year veterinary students' focus groups that discussed the suitability of the current veterinary professionalism programme at Massey University.



**Appendix 5.F:** The measures of central tendencies and percentage responses for the 47 self-development/task-oriented/relationship building veterinary professionalism attributes for 2017

Attribute	n	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less relevant	Irrelevant
<b>Summary statistics for the Self-development veterinary professionalism attributes</b>								
1. Remain composed under pressure and cope with adversity	59	3.68	0.471	4	68	32	0	0
2. Recover quickly from setbacks	59	3.49	0.598	4	54	41	5	0
3. Self-regulate emotional responses	59	3.49	0.537	4	51	47	2	0
4. Take a balanced view of own strengths, weaknesses and limitations	59	3.41	0.591	3	46	49	5	0
5. Admit mistakes and shortcomings	59	3.56	0.534	4	58	41	2	0
6. Engage in reflective practice and learn from experience	58	3.43	0.596	3	48	47	5	0
7. Adapt and respond positively to change	59	3.46	0.536	3	47	51	2	0
8. Engage in learning experiences and build expertise	59	3.61	0.492	4	61	39	0	0
9. Create new and unique ideas	59	2.71	0.671	3	12	47	41	0
10. Make connections among previously unrelated notions	59	2.90	0.662	3	17	56	27	0
11. Utilise strategies to navigate challenges and maintain wellbeing	59	3.51	0.598	4	56	39	5	0
12. Remain open to criticism without being defensive	59	3.41	0.591	3	46	49	5	0
13. Adhere to an appropriate (for the context) and effective set of core values and beliefs	59	3.27	0.611	3	36	56	8	0
14. Maintain a positive and constructive sense of humour	59	3.46	0.652	4	54	37	8	0

Attribute	n	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less relevant	Irrelevant
15. Maintain confidentiality	59	3.80	0.446	4	81	17	2	0
16. Maintain a conscious balance between work and personal life	58	3.67	0.509	4	69	29	2	0
17. Act as a role model to others	59	3.12	0.646	3	27	58	15	0
18. Provide guidance formally and informally	59	3.15	0.690	3	32	51	17	0
<b>Summary statistics for the Task-oriented veterinary professionalism attributes</b>								
19. Take responsibility for his/her own work	59	3.66	0.545	4	69	27	3	0
20. Recognise opportunities and act with a minimum of direction	59	3.17	0.497	3	22	73	5	0
21. Make timely decisions taking into account the wider context and likely consequences	57	3.61	0.526	4	63	35	2	0
22. Work to a high standard and in an organised and methodical manner to deliver results	59	3.54	0.567	4	58	39	3	0
23. Marshal resources (people, funding, material, support) to achieve goals	59	3.07	0.612	3	22	63	15	0
24. Show enthusiasm, determination and resilience	58	3.43	0.565	3	47	50	3	0
25. Demonstrate hard-work, diligence and reliability	59	3.49	0.598	4	54	41	5	0
26. Initiate new approaches to improve work practices	59	2.95	0.680	3	20	54	25	0
27. Use good judgment and employ rigorous logic to engage in clinical reasoning and solve difficult problems	59	3.63	0.488	4	63	37	0	0
28. Use his/her time effectively and efficiently	59	3.46	0.567	3	49	47	3	0

Attribute	n	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less relevant	Irrelevant
29. Recognise and respect the need for and relevance of policies, procedures and management	59	3.19	0.629	3	31	58	12	0
30. Understand the businesses side of veterinary practice	59	2.93	0.691	3	20	53	27	0
31. Appreciate how strategies and tactics work in the marketplace	55	2.69	0.605	3	7	55	38	0
32. Demonstrate formal presentation skills	56	2.75	0.667	3	13	50	38	0
<b>Summary statistics for the Relationship building veterinary professionalism attributes</b>								
33. Step up to conflicts, seeing them as opportunities	59	2.90	0.712	3	20	49	31	0
34. Manage differences of opinion with tact and diplomacy	59	3.66	0.477	4	66	34	0	0
35. Settle disputes equitably without damaging relationships	59	3.58	0.498	4	58	42	0	0
36. Manage all kinds and classes of work colleagues and clients equitably	59	3.59	0.561	4	63	34	3	0
37. Work openly and harmoniously within teams	59	3.64	0.483	4	64	36	0	0
38. Create a motivating climate in which people want to do their best	58	3.40	0.560	3	43	53	3	0
39. Empower others, making each individual feel his/her work is important	58	3.43	0.624	3	50	43	7	0
40. Genuinely care about people and be attentive to their feelings, perspectives and concerns	59	3.51	0.626	4	58	36	7	0
41. Remain non-judgmental and respect diversity of opinion	59	3.41	0.591	3	46	49	5	0
42. Display empathy towards the plight of others experiencing difficulties or discomfort	59	3.71	0.457	4	71	29	0	0

Attribute	n	M	SD	Mdn	% responses for career success			
					Essential	Desirable	Less relevant	Irrelevant
43. Express opinions, concepts and information in an uncomplicated manner using a variety of verbal and non-verbal communication styles to suit the intended audience	59	3.61	0.558	4	64	32	3	0
44. Communicate with difficult or grieving clients/customers in an empathetic manner	59	3.78	0.418	4	78	22	0	0
45. Practice attentive and active/reflective listening	59	3.59	0.529	4	61	37	2	0
46. Show an understanding and respect for the human-animal bond	59	3.71	0.457	4	71	29	0	0
47. Establish and maintain effective relationships with clients/customers and gain their trust and respect	59	3.78	0.418	4	78	22	0	0

**Appendix 6.A:** The interview protocol used during the critical incident interviews.

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**Interview protocol for critical incidents**

Brief explanation of the critical incidents study technique

**Section 1: A case/consultation which the veterinarian thought went well**

Think back over your years as a practising clinical veterinary practitioner. Think first about a case involving an interaction with a client which you think went well.

- i. Without mentioning names, please describe this interaction
- ii. Please talk about the features of this interaction which you think made the case/consultation go well
- iii. Were there any features about this interaction which could have been even better?

**Section 2: A case/consultation which the veterinarian thought did not go so well**

Now think back about a case involving an interaction with a client which did not go well at all.

- i. Without mentioning names, please describe this interaction
- ii. Please talk about the features of this interaction which you think contributed to the case/consultation not going well
- iii. Were there any features about this interaction which were good?

**Section 3: Any other comments**

Is there anything else you would like to add?

Do have any questions relating to this study?

**Prompts to use during the interview**

Try to keep the interviewee talking about a specific case and not generalised practice

Try to probe into any professional skills utilised (or neglected) if the interviewee is only referring to technical skills:

- “What do you think the client felt about that?”
- “What was the client’s response to that?”
- “What effect did that action have?”
- “What problems did that create for you?”

Challenge any inferences or judgements made by the interviewee with responses such as:

- “What made you say that?”
- “Please provide an example of what you mean”
- “What led you to form that opinion?”
- “Why was that a problem?”

Inspired by: Norman (2016) and Ginsburg *et al.* (2010).

**Appendix 6.B:** The participant consent form used before each critical incident interview.

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**Participant Consent Form**

***Essential veterinary professional skills for career success: Perceptions of veterinarians as revealed by the critical incident technique***

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree to the interview being sound recorded.

I wish/do not wish to have my recordings returned to me.

I agree to participate in this study under the conditions set out in the Information Sheet.

**Signature:**

**Date:**

.....

**Full Name - printed**

.....



**Appendix 6.C:** The information sheet for the critical incident research.

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**Information Sheet**

***Essential veterinary professional skills for career success: Perceptions of veterinarians as revealed by the critical incident reporting technique***

Critical incident reporting systems (CIRS) have become established in many fields of human medicine and are now gaining prominence in veterinary research (Hartnack *et al.* 2013). Critical incidents are defined as situations where the consequences are sufficiently definite to leave little doubt to the observer concerning its effects (Flanagan, 1954).

In the event that the discussion of a negative work experiences causes emotional discomfort, the participant will be immediately given the option of taking a break or stopping the interview.

Attendance at the interview is entirely voluntary and participants are free to stop and leave the interview at any stage.

Transcripts of the interview will be made available to the interviewee for their approval before any of the information is used for analysis and for publication purposes.

The identity of any participant or person mentioned in the interview will remain anonymous. The anonymity of any published research will guarantee that this research will have no negative impact upon any individual's professional reputation.

The Privacy Act of New Zealand allows for personal information to be used for research purposes provided that the participants are providing this information voluntarily and that it will be anonymised (both participants and people referred to in the interview) before publication. The interviews will be recorded and transcribed with the transcripts anonymised.

Audio recordings, transcripts, confidentiality agreements and consent forms will be stored in locked filing cabinets in the principal applicant's office (Room 1.43 in the Vet Tower on Massey University campus in Palmerston North) or stored on password protected computers and will not be identifiable back to original participants.

Flanagan, J. C. The critical incident technique. *Psychological Bulletin*, 51(4), 327-358, doi: 10.1037/h0061470, 1954

Hartnack, S., Bettschart-Wolfensberger, R., Driessen, B., Pang, D., Wohlfender, F. Critical incidence reporting systems - an option in equine anaesthesia? Results from a panel meeting. *Veterinary Anaesthesia and Analgesia*. 40(6). 3-8. doi: 10.1111/vaa.12065, 2012

**Appendix 6.D:** A screen shot of the NVivo page showing the major themes and minor themes developed from thematic analysis of transcripts of critical incident interviews conducted with practising clinical veterinary practitioners with <10-years' experience.

Name	Files	References	Created On	Created By	Modified On	Modified By
Communication skills	0	0	8/12/2017 11:35 AM	SIJGG	23/08/2018 4:19 PM	SIJG
Building rapport with clients	9	26	8/12/2017 12:15 PM	SIJGG	14/02/2019 9:02 PM	SIJG
Establishing mutually agreeable agendas with the client	1	3	16/01/2018 10:36 AM	SIJG	23/08/2018 3:55 PM	SIJG
Providing clear explanations to clients	10	28	16/01/2018 10:49 AM	SIJG	14/02/2019 7:47 PM	SIJG
Accounting for client's opinion	8	13	16/01/2018 11:41 AM	SIJG	15/02/2019 7:14 PM	SIJG
Demonstrating reflective listening	1	2	16/01/2018 12:03 PM	SIJG	21/05/2020 1:00 PM	SIJG
Engaging in good interpersonal communication with peers	1	3	16/01/2018 2:02 PM	SIJG	21/05/2020 1:00 PM	SIJG
Displaying empathy towards client	4	7	8/12/2017 12:33 PM	SIJGG	20/02/2019 9:32 PM	SIJG
Showing the client courtesy and respect	6	7	16/01/2018 11:03 AM	SIJG	16/02/2019 3:24 PM	SIJG
Accountability and integrity	0	0	23/08/2018 3:34 PM	SIJG	23/08/2018 4:15 PM	SIJG
Acknowledging limitations	2	2	16/01/2018 1:48 PM	SIJG	16/01/2018 1:49 PM	SIJG
Admitting mistakes and apologising	6	7	8/12/2017 12:12 PM	SIJGG	13/02/2019 11:41 PM	SIJG
Accepting responsibility	3	7	15/01/2018 9:59 AM	SIJGG	7/12/2018 1:13 PM	SIJGG
Being honest	5	8	8/12/2017 1:23 PM	SIJGG	18/02/2019 10:27 PM	SIJG
Being trustworthy	7	10	8/12/2017 1:18 PM	SIJGG	18/02/2019 10:27 PM	SIJG
Personal wellbeing	0	0	23/08/2018 4:12 PM	SIJG	23/08/2018 4:14 PM	SIJG
Receiving collegial support	9	21	8/12/2017 11:29 AM	SIJGG	19/02/2019 5:56 PM	SIJG
Engaging in reflective practice	2	3	8/12/2017 12:26 PM	SIJGG	19/02/2019 5:56 PM	SIJG
Possessing resilience	3	5	16/01/2018 3:32 PM	SIJG	19/02/2019 5:56 PM	SIJG
Enjoying self-confidence and self-esteem	6	14	8/12/2017 1:52 PM	SIJGG	19/02/2019 5:55 PM	SIJG
Quality of care	0	0	23/08/2018 4:14 PM	SIJG	23/08/2018 4:14 PM	SIJG
Emphasising the importance of customer service	1	1	16/01/2018 11:53 AM	SIJG	25/02/2019 4:56 PM	SIJG
Time management	1	1	20/02/2019 9:10 PM	SIJG	26/02/2019 8:03 PM	SIJG
Empathy and care towards patient	1	1	20/02/2019 9:21 PM	SIJG	20/02/2019 9:32 PM	SIJG
Technical competency	3	5	20/02/2019 9:26 PM	SIJG	20/02/2019 9:28 PM	SIJG
Acknowledging importance of communication skills	8	18	21/05/2020 12:57 PM	SIJG	21/05/2020 12:57 PM	SIJG

**Appendix 6.E:** A screen shot of a memo that describes the definition of the code, acknowledging limitations, and helps to explain the pathway towards the development of the minor theme: accountability and integrity.

The screenshot displays the NVivo 12 Pro interface. The top menu bar includes File, Home, Import, Create, Explore, Share, and Memo Tools. The Memo Tools ribbon contains options like Annotations, Quick Coding, Coding Stripes, Highlight, Code, Code In Vivo, Range Code, New Annotation, Annotations, Word Cloud, Compare With, Explore Diagram, Visualize Memo, Query, Find, and Edit. On the left, a navigation pane shows 'Quick Access' (Files, Memos, Nodes), 'Data' (Files, Greater than 10 years experience, Less than 10 years experience, File Classifications, Externals), 'Codes' (Nodes, Greater than 10 years experience, Less than 10 years experience, Relationships, Relationship Types), 'Cases', 'Notes', 'Search', 'Maps', and 'Output'. The main workspace is divided into a tree view on the left and a memo content area on the right. The tree view shows a hierarchy of codes under 'Greater than 10 years experience', with 'Accountability and integrity' selected. Below the tree is a table with columns 'Name', 'Files', and 'References'. The memo content area shows the text of the memo for the selected code, including a definition, a note on limitations, and several quotes from respondents.

Name	Files	References
Accountability and integrity	0	0
Accepting responsibility	2	3
Acknowledging limitations	2	2
Admitting mistakes and apologising	6	12
Being honest	5	9
Being trustworthy	8	34
Acknowledging importance of communication skills	8	22
Communication skills	0	0
Accounting for the client's opinion	4	7
Acknowledging the human-animal bond	4	6
Building rapport with clients	11	26
Demonstrating reflective listening	5	8
Displaying appropriate non-verbal behaviour	9	23
Displaying empathy towards the client	9	14
Engaging in good interpersonal communication with peers	3	4
Establishing mutually agreeable agendas with the client	4	5
Getting client's consent	2	2
Keeping good medical records	2	4
Providing clear explanations to client	10	32
Showing the client courtesy and respect	10	19
Personal well-being	0	0
Engaging in reflective practice	3	4
Enjoying self-confidence and self-esteem	7	11
Maintaining a good work-life balance	3	6
Physical safety	2	2
Possessing resilience	3	4
Receiving collegial support	6	22
Quality of care	0	0
Emphasising the importance of customer service	2	2
Staffing levels	3	6
Technical competency	6	10

**(Greater) Acknowledging limitations**

One source referenced a concept that might be effectively described by the code "acknowledging limitations".

This code includes quotes from respondents where they acknowledge they don't have full control over every scenario, or may make mistakes from time to time.

The main message, however, seemed to be that veterinarians were not infallible and needed to admit if they did not know something or something was beyond their capabilities. The client, in their opinion, seemed to appreciate this honesty.

*"...you will succeed 80% of the time and 20% of the time it won't go the way that you expected it to and that's just how it goes you know and that that's okay"*

*"...I feel that admitting I don't know is what keeps me from making a lot of extra mistakes."*

*"...and I think they kind of appreciated that I would try my best and I would ask if I need to."*

This forms an important component of vet accountability even though there is only one reference for this attribute from vets with <10-years experience. It acts to prevent veterinarians from making mistakes.