A Study of Occupational Health and Safety Management in Irish Veterinary Practices

By

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This research project is submitted in partial fulfilment of the Degree of

Masters of Business

School of Business

Athlone Institute of Technology

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August, 2013

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Acknowledgments

I would like to thank my family and friends for all their support and understanding throughout the past year, especially my parents and my sister Eveline, who have had to suffer me through the rough times. Despite this, they have continued to provide me with immeasurable support and have always encouraged me immensely in my studies.

I would also like to thank my supervisor Mr. Joe Price for all his support, guidance and encouragement throughout this research project. In addition, I would like to thank all the veterinary practices who contributed to this study, as well as the four veterinary professionals who, so very kindly, participated in my interviews. Without their support and valuable input this research would not have been possible.

Last but not least I would like to thank both Ms. Lisa Geraghty and Mr. William Meaney, whose sound advice, encouragement and guidance led me to apply for the Master of Business

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Abstract

It is widely acknowledged within the literature that veterinary professionals are faced with a unique set of occupational health and safety risks. High levels of work-related infections, disease and injuries have been reported in Australia, the United States and more recently in the United Kingdom. However, to date no empirical research has been conducted into the management of occupational health and safety risks in an Irish context.

The main aim of this study is to address the lack of Irish data on the management of occupational health and safety in veterinary practices - including but not limited to; where the majority of Irish veterinary practices currently source their occupational health and safety information and to critically assess how basic seven specific occupational health hazards are currently managed within Irish veterinary practices.

An on-line questionnaire was distributed to a selection of Irish Veterinary practices using a systematic random sampling technique. In addition to this, four semi-structured, interviews were also conducted with a variety of veterinary professionals. A total of 56 practices (52%) responded of which 100% were eligible for inclusion in the study. Of these practices 50% were small-animal, 34% were mixed-animal, 9% were equine, 4% were large-animal and 4% were a combination of two or more of the aforementioned practice types. Ninety-eight per cent of responding practices had a written safety statement. However, only 79% had allocated a staff member responsible for health & safety within the practice and only 67% of practices stated that a staff member had completed some form of basic Health and safety training. Both psychosocial and manual handling health hazards appeared to be relatively overlooked by practices, with

77% of practice reporting having no policy in relation to occupational stress and 75% of interviewees reporting manual handling as an issue.

This study concludes that Irish veterinary practices rely heavily on both the Health and Safety Authority's Website and the professional body, Veterinary Ireland, for occupational health and safety information and advice. There also appears to be a lack of personnel competently trained in health and safety employed within Irish veterinary practices. The author concludes that this could be a contributing factor in the observed insufficiencies in the management of health and safety within Irish veterinary practices.

Chapter One: Introduction

1.1 Introduction

This introductory chapter aims to provide the reader with a brief background and a general understanding of the chosen research area – Veterinary Occupational Health and Safety. Included are an outline of the overall research aims and objectives, the author's rationale for undertaking this specific study and a project outline, summarising the key components of each chapter within this research dissertation.

1.2 Research Aim and Objectives

1.2.1 Research Aim

The author believes that most practicing Irish veterinary surgeons and veterinary nurses have some basic working knowledge of the occupational health and safety hazards which affect them. However, to date no empirical research has been conducted into the management of occupational health and safety risks within Irish veterinary practices.

The main aim of this study is to address the lack of Irish data on the management of occupational health and safety in veterinary practices by examining where the majority of Irish veterinary practices currently source their occupational health and safety information and/or advice and by critically assessing how seven specifically chosen occupational health hazards are currently managed within Irish veterinary practices. In conducting this research the author aspires to producing reference data for Ireland which may provide a valuable foundation for further studies into this topic area.

1.2.2 Research Objectives

The researcher has derived the following three objectives from the aforementioned research aim;

1. To critically appraise current literature available on veterinary occupational health and safety.
2. To investigate where the majority of Irish veterinary practices currently source their occupational health and safety information and advice.
3. To critically assess how specific occupational health hazards (seven in total) are currently managed within Irish veterinary practices.

1.3 Background to the study

The purpose of this section is to present the necessary background information required by the reader in order to gain an understanding of the research topic. As stated previously, the purpose of this study is to review the current management practices of Irish veterinary clinics in relation to occupational health and safety. First and foremost, the author will provide definitions of occupational health and safety prior to outlining some key background information on the chosen research area.

There are several different definitions of occupational health and safety available; Stranks, (1998, p. 74) states that occupational health " *is concerned with the relationship of work to health and the effects of work on the worker*". Alli, (2008, p. vii) defines occupational safety and health *"as the science of the anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and well-being of workers*". The primary piece of legislation covering

occupational health and safety in Ireland is the Safety, Health and Welfare at Work Act, 2005. According to the Health and Safety Authority, (2005, p. 2) this legislation "*places responsibility for occupational health and safety on all stakeholders. The Act develops the role of employers, employees and Government in framing and implementing occupational safety and health policy in Ireland*".

Traditionally the Irish veterinary business landscape consisted of small, one-vet practices which were often run from the veterinary practitioner's house but in recent years the Irish and United Kingdom veterinary industry has witnessed significant growth. This growth has seen the replacement of small village veterinary practices with large veterinary clinics and hospitals and the introduction of large corporate veterinary businesses in many areas. In addition, over the past few years, the number of women entering the veterinary profession has increased significantly. In his article Wedderburn, (2013) reports that almost 80% of veterinary students are now female. According to Moore et al, (1993) many veterinary occupational health and safety risks are considerably more harmful to females, particularly those who are pregnant or of child-bearing age. Therefore, women must be made aware of and avoid over-exposure to these occupational hazards where possible. As a result of this altering business landscape, the recession and recent changes in both professional regulation and the advertising code the veterinary industry has become more competitive. All veterinary practices must therefore be able to manage occupational health and safety in order to maintain high standards, prevent work-place accidents, reduce costs and remain legally compliant.

As cited in Baxter, (2013) recent research conducted out on behalf of the Health and Safety Authority (HSA) revealed that during the 12 month period to November 2011 one in seven small Irish businesses experienced a workplace injury with costs estimated at 18.5 million. Baxter, (2013, p. 17) further states that "*in the services sector this cost was €1,093,966, with the bulk of the costs being attributed to sick pay, medical expenses, cost of replacement staff, personal injury and legal costs*". As detailed in Baxter, (2013) the cost of a workplace accident to an employer in the service sector on average equalled €2,057. In addition, the average compensation awarded from the Occupational Injuries Board for work-related injuries was €27,000 (Baxter, 2013). According to Baxter, (2013, p. 17) "*a positive and proactive approach to health and safety management can minimise the potential for financial damage to your business*" as well as reducing the "..*damage to your brand and your business reputation*". Therefore, the author believes this recent Health and Safety Authority study only further illustrates the importance of continuous effective management of Occupational Health and Safety for the long term viability of a veterinary practice or any small business.

Although there has been previous research conducted on various veterinary occupational health and safety topics in the United States, Australia, India and the United Kingdom to date no research has been carried out based on Irish veterinary practices. As of July 2013, there were 2,358 veterinary surgeons, 503 veterinary nurses and 717 veterinary premises registered, in the State, with the Veterinary Council of Ireland (Veterinary Council of Ireland, 2013). Research conducted by several authors including; Poole et al (1998), Jeyaretnam, Jones & Philips, (2000) and Moore et al (1993) suggests that veterinary work can encompass significant occupational risks. An

Australian study carried out by Jeyaretnam, Jones & Philips, (2000) concluded that veterinary workplaces are shown to be hazardous, with 70% of respondents reporting they suffered some form of work-related injury during a ten year period. While in a Canadian study conducted by Epp & Waldner, (2012) 93% of respondents reported receiving some form of injury during the previous five year period. Poole et al, (1998) states that the most frequent injuries sustained by veterinary staff included falls, lifting injuries, animal bites, sharps/needlestick injuries, and exposure to hazardous chemicals.

This study addresses the lack of Irish data in relation to the management of occupational health and safety in veterinary practices - including but not limited to the main sources of health and safety information used by Irish veterinary practices, how specific health and safety risks are identified and controlled and how occupational health and safety is managed in Irish veterinary practices. With data on the topic of veterinary occupational health and safety being relatively limited world-wide and non-existent in Ireland to date, the author believes there is a gap in the research which needs to be addressed as the subject of occupational health and safety becomes more and more topical.

1.4 Research Rationale

As outlined in previous sections, the primary aim of this study is to review current management practices employed by Irish veterinary clinics in relation to occupational health and safety with a view to highlighting the need to improve the awareness of occupational health and safety within the Irish veterinary industry. The author also predicts that this research will highlight the need to improve the availability of veterinary specific occupational health and safety information and resources.

Through her initial analysis of the existing literature on veterinary occupational health and safety, the author identified that previous empirical research has been conducted mainly in Australia, the United States, the United Kingdom and in India but that to date no research has been carried out from an Irish perspective. Therefore, the author felt that collecting and disseminating the Irish data on this topic would prove valuable to the veterinary industry.

Further, to identifying a 'gap' in the research in relation to this topic area, the author has also previously worked within the veterinary sector and has a keen interest in all aspects of veterinary business and veterinary practice management. The researcher strongly believes that this study will be beneficial to Irish veterinary practices as it will raise awareness, provide reference data on the management of specific occupational health and safety hazards and will highlight the areas which require improvement. Practice principals and/or managers can then utilise this valuable knowledge to revise management practices, improve productivity, save money and reduce the number of work-related injuries sustained in Irish veterinary practices each year.

1.5 Research Project Outline

Outlined below are the six chapters of this research dissertation and a brief description of the contents of each chapter.

1.5.1 Chapter One: Introduction

This chapter outlines the nature of the research, the contents and the author's rationale for conducting the study. The purpose of this chapter is to provide the reader with a

brief background and a general understanding of the chosen research area – Veterinary Occupational Health and Safety.

1.5.2 Chapter Two: Literature Review

This chapter provides a comprehensive review of the literature on veterinary occupational health and safety. The author compiled this chapter through desk research and by critically analysing prevailing literature on the subject area. Areas addressed in this section include; physical, biological, chemical and psychosocial occupational health hazards related to the veterinary profession. This section provides context for the study and illustrates the knowledge acquired by the researcher in relation to the subject area derived from studying the relevant secondary research, thus fulfilling the first research objective as outlined previously by the author.

1.5.3 Chapter Three: Research Methodology

The purpose of this chapter is to outline the methodology undertaken by the author in order to conduct the research, produce the research dissertation and accomplish the study's primary objectives. This chapter outlines and justifies the research purpose, philosophy, approach and strategy as well as detailing the ethical considerations and research limitations.

1.5.4 Chapter Four: Analysis of Findings

The purpose of this chapter is to present the key findings derived from the primary research carried out by the author in relation to the management of occupational health and safety in Irish veterinary practices. The data presented in this section was obtained by the researcher through the distribution of on-line questionnaires using a systematic random sample of Irish veterinary practices as well as from conducting semi-structured interviews with a selection of veterinary professionals.

1.5.5 Chapter Five: Discussion

Chapter five involves a detailed discussion of the main findings linking them to the relevant literature discussed in chapter two. The purpose of this chapter is to provide a cross-examination of the overall findings, highlighting any relationships and/or differences which may arise between the primary and secondary research.

1.5.6 Chapter Six: Conclusions and Recommendations

The purpose of this chapter is to summarise the research project as a whole and presents the author's overall conclusions and recommendations based on the research findings and analysis conducted. An integral part of this chapter is the emphasis on how the overall research aim and objectives have been fulfilled by the researcher. Suggestions for possible future research on the topic area will also be highlighted and outlined within this section. Finally the author will include a personal reflection on the journey involved in completing this research dissertation.

1.6 Conclusion

This introductory chapter has briefly introduced the research topic, the main aims and objectives of the research and the rationale behind conducting this specific study. The following chapter will review the existing empirical research currently available on veterinary occupational health and safety and the management of same.

Chapter Two: Literature Review

2.1 Introduction

According to Gabel & Gerberich, (2001, p. 80) occupational injuries "*are a major source*" of morbidity and mortality amongst all workers including 65, 000 practicing veterinarians in the USA alone. Jeyaretnam & Jones, (2000) conducted a literature review to determine the major occupational hazards encountered by Australian veterinarians and their staff. They found that veterinary is regarded as one of the high risk groups for occupational health hazards in Australia. Other Australian research carried out by Lucas et al, (2009, p. 327) cited that according to the Health Risks of Australian Veterinarians (HRAV) study, which investigated graduates of all the Australian veterinary schools from the years 1960-2000, more than 50% of Australian veterinarians reported sustaining a significant work-related injury over the course of their career. Definitive figures are not currently available for occupational disease and/or injuries sustained in Irish veterinary practices as there have been no previous investigations into this area from an Irish perspective thus far. In a study conducted by D'Souza et al, (2009, p. 316) it is stated that "*In the UK, only 87 statutory reports (as required by the Reporting of Injuries, Disease and Dangerous Occurrences Regulations 1995) involving veterinary workers were made in 2003-04 to the Health & Safety Executive (HSE) and a further 76 cases of occupational ill-health were voluntarily reported to the Health and Occupation Reporting network (THOR) from 1993–2003 by physicians"*. Several of the studies reviewed suggest anecdotal evidence of or acknowledge noteworthy under-reporting of work-related accidents, illness and injuries among veterinary personnel; D'Souza et al, (2009), Weese & Douglas, (2008) and Weese & Faires, (2009). As previously acknowledged by the author work-related injuries, illness and disease often come with significant, unexpected costs for

employers. Recent research conducted on behalf of the Health and Safety Authority (HSA) reported that one in seven small Irish businesses experienced a workplace injury during a 12 month period ending in November 2011, costing them an estimated €18.5 million (as cited by Baxter, 2013).

According to Mosedale, (2009, p. 290) "*it is well recognised that there are some areas in health and safety where veterinarians are good at identifying risks*" yet there are other areas where they fall down and practices are not complying with health and safety. Mosedale, (2009) recognises the importance of the paper produced by D'Souza et al (2009) but acknowledges that significant changes have occurred in veterinary practices around the globe since it was published. D'Souza et al, (2009, p. 316) cited Poole et al (1998) as reporting "*animal bites, needlesticks, slips, trips, falls, lifting and exposure to hazardous substances*" as the most common sources of injuries to veterinary employees. Both Mosedale, (2009) and D'Souza et al (2009) both acknowledge manual handling as an occupational risk within veterinary practice with Mosedale, (2009, p. 290) stating it is a "*significant problem area in veterinary practice*". For the purpose of reviewing the literature available on this subject area the author has divided the health and safety risks into four categories to include:

- Physical
- Biological
- Chemical
- Psychosocial

The author wishes to acknowledge that the amount of health and safety risks associated with in these categories alone are non-exhaustive and for the purpose of this study the

author has chosen the most prevalent and common health and safety risks in veterinary medicine. Those risks include but are not limited to:

- Kicks, Bites and Scratches
- Radiation (X-rays)
- Needlestick/ Sharps Injuries Injury
- Chemicals (which include glutaraldehyde, formaldehyde, prostaglandins and ethylene oxide)
- Waste Anaesthetic Gases
- Zoonoses
- Occupational Stress

2.2 Physical Hazards

2.2.1 Animal Bites, Kicks and Scratches

Epp & Waldner, (2012, p. 151) states that the "*practice of veterinary medicine involves the risk of physical injury through contact with animals and equipment, repetitive motion and motor vehicle accidents*". Several studies including, Gabel & Gerberich, (2001), van Soest & Fritschi, (2004), Singleton, (2005), Leggat, Speare, & Smith, (2009a) and Fritschi, Day, & Lucas, (2012) have indicated that veterinarians and veterinary nurses are at high risk of developing shoulder injuries, back pain and other work-related musculoskeletal symptoms.

In Epp & Waldner's, (2012) study 93% of respondents reported sustaining some form of injury within the previous 5 years. Landercasper et al, (1988), who in a pioneering study, reported nearly 65% of respondents had suffered a significant animal-related injury within the previous 12 months. According to German research carried out by

Nienhaus, Skudlik & Seidler, (2005) veterinarians and their staff have a 2.9 times higher chance of suffering a work-related injury compared with general practitioners. The most common work-related accidents reported in this study were as a result of cuts, bites or scratches (59.7%). The 2004 study, by van Soest & Fritschi, reported that 98% of veterinary nurses had been bitten or scratched during their career. Nienhaus, Skudlik & Seidler, (2005, p. 232) revealed that animals were "*the most frequent cause of occupational accidents*" at 66%, with dogs and cats ranking the highest offenders in small-animal practice while horses and cows prevailed in large-animal practice. The study found that bites and scratches were the most predominant injuries caused by animals, totalling 48%. In addition the study determined that the risk of sustaining an orthopaedic fracture was more than ten-times greater when working with large animals (16.1%) in comparison to working with companion animals (1.3%). The study made reference to one specific incidence where a veterinary nurse died as a result of a dog attack while administering treatment to the patient.

Landercasper et al, (1988) established that the majority of occupational injuries were as a result of animal kicks (36%), crush injuries (12%), scratches (4%) and animal bites (3%). According to this late 1980's study, cattle and dogs were the animals most frequently involved in work-related injuries accounting for 47% and 24% respectively. In 1998, a study of veterinarians and their staff was conducted by Poole et al, revealing 55% of respondents had suffered at least one work-related accident. This is significantly lower than the aforementioned findings of Epp & Waldner, (2012). In a study carried out by Govind, (2012) among veterinarians in Kerala, India the percentage of respondents who indicated being involved in at least one occupational accident within the previous 12 months was an astonishing 81.6%. The types of injuries suffered were

reported as follows; Dog bites (6%), dog scratches (8%), cat bites/scratches (3%), animal kicks (19%), horn injuries (5%), crush injuries (8%), Stamping injuries (18%), needlestick injuries (22%) and sharps injuries (11%). Similarly, in a study carried out by Kabuusu et al, (2011) which surveyed veterinarians in the Kampala region of Uganda another significantly high incidence of animal-related occupational injuries (72%) was reported. Once again, cattle were found to be the animals most frequently involved in work-related injuries accounting for 72%, followed by cats (25%), dogs (24%) and birds (13%). In research carried out by Lucas et al, (2009) occupational injuries incurred during routine restraint of animals were most commonly caused by dogs (32%) and cats (29%). These statistics only further reiterate the earlier discussed findings of the pioneering study conducted by Landercasper et al, (1988).

After reviewing the literature available on the potential physical occupational hazards in veterinary practice the author has come to the following conclusions;

- The author deems an active awareness of the risks related to and a firm practical knowledge of the correct animal handling and restraint procedures an essential skill required by all veterinary employees in order to minimise the risks from animal-related injuries.
- The author is also of the opinion that policies relating to correct manual handling practices must be employed within every veterinary practice in order to reduce the risk of musculoskeletal problems occurring among veterinary professional.

2.2.2 Needlestick/Sharps Injuries

Weese & Douglas, (2008, p. 780) define a needle stick injury as "*an inadvertent puncture of the skin by a needle".* Weese & Faires (2009, p.1278) have commented that

the "*handling of needles and other sharp implements' is commonplace in veterinary practices*" and are an inherent risk. A study conducted by van Soest & Fritschi, (2004) found that in excess of 70% of veterinary nurses had suffered a needlestick injury during their career. More recently, the 2009 study conducted by Weese & Fairnes, found that 93% of the veterinary technicians interviewed had experienced a needlestick injury in their career. Seventy-four per cent of these technicians also stating they had experienced at least one in the previous twelve months. The study further demonstrates how needlestick injuries are highly prevalent within veterinary practices and how potentially unsafe and hazardous needle handling practices were widespread. However the study revealed that most Veterinary practices did not consider that needlestick injuries were an occupational hazard.

A study completed in 2008 by Weese & Douglas found that the same gravitas is not given to needlestick injuries in veterinary medicine as would be in human medicine. Weese & Douglas (2008) propose that whilst needlestick injuries are inherent in medicine it is hard to determine the severity of the issue as there is varying information available throughout America and Great Britain. Wilkins III & Bowman (1997, p. 451) in their study, which looked only at female veterinarians, cited that the Centre for disease control reported needlestick injuries as "*the second leading cause of occupational injury treated in US emergency departments in 1982*". Whilst the author wishes to acknowledge there are some limitations to this study, in that it reviews only the female population, the author would also like to point out that the study did so only to highlight the significant health risks certain medications can have on the pregnant female form. For example Wilkins III & Bowman, (1997, p. 455) reported that an accidental needlestick injury resulting in absorption of Dinoprost Tromethamine (a

prostaglandin) could result in miscarriage. According to Wilkins III & Bowman, (1997) this is a serious occupational hazard that goes widely unidentified and is increasingly more significant given the fact that the majority of veterinary students are now female.

It appears that accidental administration of medication through needlestick injuries is common place in veterinary medicine. A study by Samanta, Roffe & Woods, (1990) discussed the unnatural side effects of Xylazine (Rompun) in humans and the need for awareness of the pharmacological effects on humans especially given its widespread use in veterinary medicine. The aforementioned study showed that the drug in question (Rompun), which was accidentally injected during the course of normal working duty, had detrimental and rapid effects on the individual. Given that veterinarians can sometimes work alone, with large unpredictable animals the author believes this is a major cause for concern. According to Samanta, Roffe, & Woods, (1990) there have only ever been three recorded cases of Xylazine administration in human medicine. On all three occasions the use was documented as for either severe pain or suicidal purposes. Very little is actually known about the effects of Xylazine on the human race. Education and awareness is necessary in such cases to ensure that all individuals working in a veterinary practice are aware of the potential hazards in daily chores that could cause them serious health implications.

A study by Leggat, Smith, & Speare, (2009b) argues that whilst needlestick injuries signify an important occupational health and safety risk in veterinary practices that communicable diseases are of little concern to veterinary practitioners as they are not exposed to the same level of blood borne pathogens as human medicine. Whilst other studies by Weese & Douglas (2008) and Wilkins III & Bowman, (1997) support the

above conclusions none of these studies explore the findings by Samanta, Roffe, & Woods, (1990). However, all of these studies support the idea that needlestick injuries are more inherent in animal medicine because:

- Animals are less compliant than humans
- Animals are less predictable than humans
- Animals cannot be communicated with and explained the procedure

Leggat, Smith, & Speare, (2009b) also established that needlestick injuries have previously resulted in death; a veterinarian is reported to have apparently died as a result of a needlestick injury with an animal vaccine. The Leggat, Smith, & Speare, (2009b) study concluded that needlestick injuries clearly remain an occupational hazard within veterinary healthcare. Furthermore, the study highlighted the need for an increase in education and awareness in relation to the attitudes and beliefs regarding needlestick injuries within veterinary medicine. The author concurs with this deduction and also believes emphasis should be placed on promoting education and awareness of the risks related to needlestick injuries among veterinary staff using evidence based guidelines. This belief is fully supported by the Australian Department of Education and Early Childhood Development, (2013) in its "*Safe@Work Veterinary Module*". This module clearly states that safe work practices and standard operating procedures must be supplied to each employee to ensure they are aware of the policies and procedures in place, the ways in which to minimise risk and have received the appropriate training relating to all equipment being used.

Needlestick injuries do not just affect the individual administering the medication but can also have an impact on others if for example the needle is not capped correctly or is

disposed of in an inappropriate manner. Weese & Douglas, (2008) found that whilst human medicine has many blood borne pathogens such as Human immunodeficiency virus (HIV) and Hepatitis, the media coverage and awareness is much greater than in veterinary medicine. Despite the fact that there is an awareness and threat of rabies in veterinary medicine, it appears that very little, if any coverage is given to the potential concerns which may arise as a result. Weese & Douglas, (2008) suggest several preventative measures for the safer administration of injections, safer injection practices and also the use of safer blood collection devices. The Weese & Douglas, (2008) study also concluded in their report that it would be prudent of veterinarians to proactively tackle hazards such as needlestick injuries within veterinary practices in order to minimise and reduce the risk of occupational injuries to veterinary staff.

In keeping with this particular occupational hazard the author examined the literature in relation to legislation on occupational health risks in pregnancy. Given that a large majority of the previously cited research alludes to the fact that the vast majority of veterinary nurses are female and an ever-increasing number of females are now studying veterinary medicine this is, in the author's opinion, an extremely important area to explore. Bell, (2010a) examined the Safety, Health and Welfare at Work Regulations, (2007) to determine what protection if any is afforded to pregnant female employees. All female employees are protected by this piece of legislation which clearly identifies the role of the employer in protecting his/her employee. In this report, Bell, (2010a) highlights that in relation to pregnant staff the employer has a duty to;

- Assess any risk to the health and safety of the employee and any possibility of side effects on the pregnancy or the baby whilst breast feeding.
- Take measures to identify, minimise, reduce or eliminate potential risks.

- Where the risk is deemed too great or cannot be eliminated the employer must either alter the employee's duties or permit the employee to take Health and Safety leave.

The occupational risks identified by Bell, (2010a) which are most likely to cause problems for pregnant females working in veterinary practices are:

- Manual Handling: The risk of sustaining a manual handling related injury increases by approximately 30%, particularly in the latter stages of pregnancy.
- Physical Impact: working with large unpredictable animals such as cows and horses can result in accidents causing serious injuries, such as those caused by receiving a kick to the abdomen.
- Radiation: Employees expose to radiation should be meticulous managed at all times not just during pregnancy. The employer is responsible for ensuring the exposure is limited to the appropriate recommended doses for a pregnant worker in order to minimise the risk to the unborn child.
- Biological Agents: Exposure to infectious agents such as parasites, viruses, and bacteria
- Chemical Agents: Exposure to hazardous chemicals should be avoided where possible.

2.3 Chemical Hazards

2.3.1 Anaesthetic Gases and Radiation

Jeyaretnam & Jones, (2000) alludes to the fact that the profile of the profession is changing from a largely male dominated one to one that is experiencing a year-on-year increase in the number of women entering the profession. This phenomenon is also

referred to in articles by Branker, (2002), Berger, (2010) and Biele, (2012). With this rise in female veterinary professionals, comes extra occupational risk in that women are more vulnerable to certain occupational hazards, such as waste anaesthetic gases and radiation, both when of child-bearing age and while pregnant, as is the foetus.

A study in Toronto by Shuhaiber et al, (2002) examined the practices of Canadian female veterinarians in relation to their exposure to inhaled anaesthetic gases and radiation. The study determined that of the 11,000 practicing female veterinary technicians and approximately 22,240 female veterinarians in Ontario 98% and 13.9% respectively, of them were of child bearing age. Whilst most of the evidence studied in this report suggests that there is no reason to believe that occupational exposure to inhaled anaesthetics is related to congenital birth defects it does state that this is an area that has not been adequately researched and explored, especially in relation to the reproductive effects associated with these occupational health hazards. However, Shuhaiber et al, (2002, p. 364) cited numerous studies; Cohen, Bellville & Brown, (1971), Kwill-Jones, Rodrigues, Moir, & Spence, (1972), Rosenburg & Kirves, (1973), Ad Hoc Committee, (1974), Kwill-Jones, Newman, & Spence, (1975) and Mirakhur & Badve, (1975) which have shown and "*documented an increased risk for spontaneous abortions among female personnel including anaesthetists, operating-room nurses, and dental assistants*". Unfortunately, all of these studies failed to explore this issue in relation to veterinary nurses despite the large number of VN's who undertake countless anaesthesia and radiological duties on an annual basis. According to van Soest & Fritschi, (2004) 97% and 96% of veterinary nurses surveyed worked with radiation and anaesthetics respectively.

Moore et al, (1993) however found that many of the occupational risks associated with veterinary healthcare are exclusively or more significantly detrimental to the female employee. Moore et al, (1993) established that working women were more at risk in that any potential damage to their ova over the years of fertility was a concern. This study looks directly at the risks attached to female veterinary practitioners and the specific occupational hazards which potentially impact their health. In addition, Moore et al, (1993, p. 114) states it is "*important to recognise that the human embryo and fetus are much more sensitive to radiation than the adult*" and therefore refutes any of the findings in the study discussed earlier by Shuhaiber et al, (2002). Moore et al, (1993) suggests that a foetus exposed unnecessarily to radiation is more likely to suffer from mental retardation, genetic defects and developmental problems. Throughout this study, Moore et al, (1993) outline concerns in relation to female veterinary staff members being deliberately exposed to the scattered radiation rays when actively restraining an animal during radiography. This study maintains that whilst exposure to the beam can be reduced by the use of personal protective equipment such as radiation gloves, many employees still insist on performing radiographs without protection. Strong suggestions are made by Moore et al, (1993, p. 114) that this is a negligent practice which "*violates the radiation safety principles*" and must be discouraged. Furthermore, veterinary practices must commence active promotion and awareness of safe exposure limits, health and safety and the potential risks involved in working with radiation.

The threat of work related injuries are not limited to pregnant females. Studies have shown that all female staff are susceptible to sustaining a variety of work related injuries. All staff, including male employees, may be subjected to physical trauma when dealing with equipment, animals, chemicals and even unpredictable loads. The author

considers an active awareness of potential work related hazards and possible injuries as essential for all employees. The author is also of the opinion that preventative measures must be in place within every veterinary practice as well as all the appropriate policies and procedures and relevant employee training.

2.4 Biological Hazards

2.4.1 Zoonoses

A study by Jeyaretnam & Jones, (2000, p. 751) stated that in Australia veterinary professionals are considered a '*high risk group for occupational hazards'*. The study concluded that zoonoses are generally well documented and recognised by Australian veterinarians. For the purpose of this review the term 'zoonoses' has been defined as *"any disease or infection that is naturally transmissible from vertebrate animals to humans"* (World Health Organisation, 2013). Bharwana, et al, (2012, p. 7) and Weese, Peregrine, & Armstrong, (2002a, p. 631) both state that zoonotic diseases vary in seriousness and can range from "*subclinical to fatal*". According to the Centers for Disease Control and Prevention, (2013) contracting a zoonotic infection such as Toxoplasmosis when pregnant may affect the foetus with infected babies potentially being born asymptomatic at birth but developing serious repercussions later in life, such as blindness and or mental disability. However, male and female employees are equally at risk of contracting a zoonotic infection. The variety of zoonotic diseases to which veterinarians and their staff can potentially be exposed to is discussed in Stevenson & Hughes, (1988). The following examples of zoonotic diseases and infections include many of the zoonoses discussed by Stevenson & Hughes, (1988) along with a few additions;

- Salmonellosis
- Dermatophytosis (Ringworm)
- Leptospirosis
- Bartonellosis (Cat scratch disease)
- Tuberculosis (TB) and or Brucellosis
- Cryptosporidiosis
- Toxoplasmosis
- Rabies
- Methicillin-resistant Staphylococcus aureus (MRSA)

The author acknowledges that a large proportion of the literature available on zoonoses appears to come from the continent of Australia. The studies completed in the United Kingdom and United States of America are merely smaller studies seeking to examine the effects of biological agents in veterinary. Additionally, they recognise that to date there are no comprehensive figures available for the United Kingdom to compare and contrast with the Australian studies which commenced with Stevenson & Hughes back in the late 1980's.

A study by Langley, Pryor & O'Brien, (1995) surveyed all the veterinarians in North Carolina to determine and evaluate the exposure experienced in practice to numerous hazards, including zoonoses. According to this study at least 35% of the subjects surveyed had contracted one zoonotic infection during their career. The zoonotic infections reported were similar to those listed above but also included several additional ones. No comparative differences were noted between the genders in acquiring a zoonotic disease. However, age did appear to be a factor in this study, with the older generation being determined as more likely to have acquired zoonotic diseases

such as brucellosis, leptospirosis and toxoplasmosis. No known reason or cause was attributed to this finding.

A study conducted in the United States by Wright et al, (2008, p. 1863) stated that "*zoonotic diseases are a growing concern*". This study was conducted to determine the level of infection control used by veterinarians in the United States. The study found that compliance was "*generally*" poor and concluded that this may indicate the reason why zoonotic diseases and infections are prevalent within the profession (Wright et al, 2008, p. 1863). In addition, this study reported that small animal and equine veterinary practices that were found to have no written policies and procedures in place to protect staff were considerably more likely to have a low precaution awareness score.

Wright et al, (2008) also reported that on comparison men rated poorly on precaution awareness. This study concluded that most veterinarians in the United States of America were not aware of or engaging in the appropriate infection controls measures to prevent zoonotic infections within their practice. Similarly, a study in the United Kingdom conducted by Constable & Harrington, (1982) reported that veterinary surgeons were the most at risk, amongst veterinary staff, of contracting zoonotic infections. The author feels that as the veterinary profession has evolved significantly since this study was carried out in the early 1980's and that the findings might be significantly different today. Basing her assumptions on the number of additional veterinary nurses, laboratory technicians etc. now employed in practice, whom are, in the author's opinion, just as highly at risk now as veterinarians were in the early 1980's. Constable & Harrington, (1982) also recognised that the number of zoonoses reported by participants was limited by the questionnaire design to include only their current

employment and did not review previous career history. This is a factor which the author believes may have greatly affected the outcome of the statistics produced by the study. Whilst the study alludes to the extensive documentation on zoonoses, it does nothing to concretise the findings and or measure the risk involved. Bharwana et al, (2012) conducted a very comprehensive study in Pakistan to review all the literature available on occupational health risks within the veterinary profession. The study was undertaken to "*observe the level of knowledge, aptitude, practice and experience regarding occupational health risks*" amongst veterinarians. Self-administered questionnaires were distributed to 180 veterinarians and the response rate was an outstanding 100%. The study recognised as per several other studies, including Weese, Peregrine & Armstrong, (2002) reviewed in this literature that zoonotic diseases ranged from mild to critical. It also documented that personal protection equipment and employee awareness played a fundamental and vital part in the management and protection of staff from zoonotic infections.

Bharwana et al, (2012) also concluded that awareness of zoonotic diseases was poor among veterinary technicians with only 14% of respondents having an awareness of the hazards compared with 60% of veterinary surgeons. The study attributed these findings to the fact that junior technicians often learned more from their peers, which did not bode well given the poor awareness amongst this group in the first instance. Health and safety training amongst both groups (veterinarians and veterinary technicians) was scant with most veterinarians having only received training during their academic years. More than half of respondents (64%) stated they were unsatisfied with their training. The study concludes that vaccination against zoonotic diseases is essential for all veterinary staff, risk management needs immediate attention in most veterinary

practices and adequate training must become mandatory in order to protect staff against infection, while also improving awareness and compliance within the veterinary profession.

Weese, Peregrine & Armstrong, (2002) conducted a similar study in Ontario, Canada to determine zoonotic exposure and its effects. This study was limited to small-animal practices and concluded that "*the risk of exposure to zoonotic agents is inherent in the practice of veterinary medicine*" (Weese, Peregrine & Armstrong, 2002b, p. 799). This study also determined that it was impossible to entirely prevent exposure to zoonotic agents but that specific control measures could be undertaken in order to minimise the potential risk to veterinarians and their staff.

In the authors opinion, it is evident from the literature reviewed that attention needs to be given to establishing and improving awareness within this healthcare discipline on the hazards and threat of zoonotic infections, the measures that can be employed to prevent said infections and the training that is essential amongst the profession to ensure the required changes occur. The relationship between pregnancy and zoonotic disease was not explored in any of the articles reviewed despite the fact that exposure to infectious and viral diseases for a pregnant employee is well documented in other health professions and that it is widely acknowledged that these diseases pose a potential threat to a developing foetus. However, the author has examined pregnancy, albeit very lightly, in this review already and believes there is potential for this aspect of health and safety to be explored and expanded further in future research.

2.5 Psychosocial Hazards

2.5.1 Occupational Stress and Suicide

In an article written by Kinsella, (2006) difficulties with clients, competing practices, long working hours, financial problems and lack of annual leave have been highlighted as the main factors which cause stress among veterinarians. Kinsella, (2006, p. 704) anonymously cites a study which was carried out among 740 Irish veterinarians in 2003. This study, used an "*ASSET*" test to screen for the risk of occupational stress. The study listed the following as the most common stressors; "*client's expectations and demands, management issues regarding staffing problems, technology, legislation, bureaucracy, paperwork, conflicts, driving and isolation, but most significantly work/life balance"* (Kinsella, 2006, p. 704). In her article, Kinsella, (2006, p. 704) also cites a similar Irish study conducted by the Connaught Clinical Society which concluded that 50% of veterinarians studied had reached "*breaking point*" and an equivalent number personally knew colleagues who had committed suicide. This study also identified the following as the main causes of occupational stress in veterinarians;

- Lack of work/life Balance and large workload
- Financial pressures
- Demanding or difficult clients
- Work-related relationships

Landercasper et al, (1988) and Jeyaretnam & Jones, (2000) also suggest fatigue, stress and long working hours as possible causes for the "*loss of usual caution*" thus resulting in possible injury (Jeyaretnam & Jones, 2000, p. 756).

Work related stress rates highly as one of the causes of suicide. A recent research piece by Bartram, Yadegarfar & Baldwin, (2009) stresses the association between occupational stress and the rates of depression and anxiety. This study established that employees without any previous history of mental health issues who were placed in highly demanding jobs, such as veterinary, have double the risk of exhibiting mental health issues in contrast with those in low demand jobs. It is clearly recognised throughout the literature examined that the veterinary profession is considered to be a highly demanding occupation based on:

- Long working hours
- Lack of control over work load/Case overload
- Pressure
- Lack of support
- Isolation and lone working
- Occupational stress
- Occupational hazards

According to a study carried out by Govind, (2012, p. 6) "*the average number of hours of work on the previous day for a veterinarian in the study was 7.38 hours*". Bartram, Yadegarfar, & Baldwin, (2009) recognise that most of the literature available on veterinary practice stress has been conducted outside of Ireland and the United Kingdom. Their 2009 study aims to assess the potential contribution occupational stress has on veterinarians in the United Kingdom. Male respondents scored higher in all the

areas assessed compared with the female participants, which is in keeping with the national general statistics. The study concluded that the veterinary sample examined reported a higher potential of suffering from occupational stress than the general population.

A study carried out by Blair & Hayes, (1980) indicates that death by suicide is significantly higher in the veterinary profession than among the general public. Authors such as, Kinlen, (1983), Mellanby, (2005) and Miller & Beaumont, (1995) have since conducted similar studies confirming the observations on mortality due to suicide made by Blair & Hayes, (1980). There has been much speculation into the reasons why the veterinary profession has such a high incidence of suicide. Mellanby, (2005) cites; Blair & Hayes, (1980), Adkin, (2000), Anon, (2000), Jeyaretnam, Jones, & Philips, (2000) and Tutt, (2000) suggesting the following as contributing factors to the increased prevalence of suicide within the veterinary profession;

- Work-related stress
- Stigmatisation associated with mental health issues/disorders
- Reluctance for those with suicidal ideations to seek professional help
- isolation
- Ease of access to potentially lethal drugs

The high levels of occupational stress and ease of access to dangerous drugs among other proposals have been suggested by several authors, including but not limited to; Blair & Hayes, (1980), Adkin, (2000), Anon, (2000), Jeyaretnam, Jones, & Philips, (2000), Tutt, (2000), Kinsella, (2006) and Bartram & Baldwin, (2010). It is also widely suggested that mental and physical stress-related occupational health problems arising

from work-related stress are rarely addressed in any profession due to the stigmas attached.

Independent studies into suicide carried out by Bartram & Baldwin, (2010) and reviewed by Whitecomb, (2010) further compound the study carried out by Mellanby, (2005). Whitecomb, (2010, p. 1) states that the study conducted by Bartram & Baldwin, (2010) found that "*the number of actual suicides among veterinarians is not high, but proportionally, the veterinary profession has a high rate compared to other healthcare professions*". In her review of the Bartram & Baldwin, (2010) research Whitecomb, (2010) cites that the most commonly used method of suicide amongst veterinarians according to the data correlated was found to be self-poisoning with barbiturates. Bartram & Baldwin, (2010) established that "*deliberate self-poisoning accounted for 76% to 89% of suicides in male and female veterinarians, respectively, compared to the rates of 20% (men) and 46% (women) for the general population*" (Whitecomb, 2010, p. 1). Bartram & Baldwin, (2010) also concluded that ease of access to lethal drugs could be viewed as a possible indication as to why this may be the preferred method of suicide and stated that Veterinarians are not as supervised or regulated when it comes to medication as other health professionals. According to Bartram & Baldwin, (2010) the second most common means of suicide amongst veterinarians is suicide by firearm which accounted for 15% of the veterinarian suicides analysed compared to 5% of the overall suicides among the general population. Bartram & Baldwin, (2010) suggest that this may be due to the fact that fire arms are often readily available especially in equine, large-animal and mixed practices.

In his article, Wedderburn, (2010) notes that thirteen suicides per annum may not seem like a particularly high number but acknowledges that in a profession so tight and small it is a considerable number. He argues that statistically veterinarians are four times more likely to take their own life than a member of the general public. He suggests that the above statistic equates to virtually every veterinary surgeon knowing at least one veterinary colleague who has sadly taken their own life. In his article, Wedderburn, (2010) expresses his opinions on the causes of suicides in veterinarians which further concur with those of both Mellanby, (2005) and Bartram & Baldwin, (2010).

Lee, (2013) describes how during her training a close colleague committed suicide. Admitting that as her friends they had been completely unaware that she was struggling with depression. Lee, (2013) states that since then two other colleagues, personally known to her, have also committed suicide – one by use of a firearm and one by self-poisoning. This further reiterates the findings of Bartram & Baldwin, (2010). In her article, Lee, (2013) expresses how shocking she found the statistics regarding suicide within the veterinary profession to be. With this Lee, (2013, p. 12) refers to the "*darker-side*" of veterinary where professionals possibly feel weak if they admit to having mental health issues and or that they are unable to manage the stress and strain of the job. Kinsella, (2006) conducted a small research study, among veterinarians in counties Carlow and Wexford, in which 100% of the responding veterinarians personally knew one or more colleagues who had committed suicide. "*Two vets knew eight colleagues each that took their own life, and one respondent was aware of six colleague deaths to suicide*" (Kinsella, 2006, p. 704). Lee, (2013) concludes that veterinary professionals need to be provided with the necessary tools and skills in order to maintain a healthy

mental status, recognise the signs of depression and be comfortable in seeking help if required.

The Annual Report on Suicide released by the Health Executive Service, (2008, p.1) states that *"suicidal behaviour continues to be a significant public health issue in Ireland*". Whilst the report does not examine the statistics specific to each occupation it does however identify that "*the veterinary profession has a higher rate of suicide than any other professional working group*" (Health Service Executive, 2008, p. 10). The report identifies four specific strategic areas that require major input, one of these being target groups that are particularly vulnerable. Given our earlier conclusions and considering the above report identifies veterinary professionals as a vulnerable group, the author feels that all veterinarians should be offered immediate stress, depression and suicide awareness training, education and support. Education into recognising the signs and symptoms of depression and mental illness on both a local and a national level could prove advantageous and possible life saving. The author also concurs with the notion that both resources and funding, as per the guidelines in the report, should be made available to the veterinary sector in order to provide support, advice and education on mental health issues, work-related stress and suicide.

2.6 Conclusion

An article by Beckett, (2012) illustrates how working in veterinary practice can present staff with daily challenges when it comes to occupational health hazards. Epp & Waldner, (2012) and Nienhaus, Skudlik, & Seidler, (2005) also agree that veterinarians and their staff work in an environment which poses a unique variety of occupational health risks. The article by Beckett, (2012) highlights the need for these hazards to be

managed diligently in the workplace in order to minimise the often hidden, underestimated and significant costs related to work-related accidents and ill-health. Beckett, (2012) believes that the key to managing risks is in the identification and assessment of same. She also notes in her article that a first aid box is essential in all veterinary practices as the majority of occupational injuries seen in a practice on an annual basis were animal bites, kicks and scratches, lacerations, eye injuries, back injuries and chemical burns.

Mosedale, (2009) alludes to the fact that whilst those in veterinary practices are perhaps aware of the potential occupational hazards posed within the industry they must look to occupational health and safety experts from human medicine for advice and guidance. In her article, Mosedale, (2009) notes that those involved in setting the standards and practices must be mindful of the specific health and safety issues affecting veterinarians and their staff.

From all the literature reviewed it is generally noted that the veterinary profession is exposed to a number of specific occupational health hazards in the form of injury, infection and disease. In part, some of the authors believe that veterinary professionals play down or leave unreported the number of risks they are exposed to on a continual basis. The author believes there is a definite need to directly assess the management of occupational health risks in Irish veterinary practices to determine the amount and type of occupational health hazards and injuries Irish veterinary professionals are exposed too.

From her review of the literature available on the topic the author regards continuous professional development, training and education as a vital element in ensuring all risks are assessed, minimised, reduced and/or eliminated. In the event that risks cannot be eliminated the author would envisage that safe operating procedures would be put in place to ensure practice compliance with legislation and employee safety. Previous literature reviewed on the subject area has highlighted the need for veterinary employers to foster, actively promote and encourage a health & safety culture among their employees.

The intention of this chapter was to provide the reader with a comprehensive review of the previous literature available on occupational health and safety with the veterinary profession thus fulfilling the study's first research objective Within this chapter, the author aimed to provide context for this study and to demonstrate the knowledge accumulated through conducting a critical analysis of the relevant secondary research. The following chapter will outline and justify the methodologies chosen and undertaken by the author in order to conduct the primary research, compile the dissertation and satisfy the main research aims and objectives.

Chapter Three: Research Methodology

3.1 Introduction

Salkind, (2012, p. 3) refers to research as " *a process through which new knowledge is discovered*". Research methodology refers to the process which should be utilised in order to collect, analysis and interpret data (Saunders, Lewis, & Thornhill, 2012, p. 674). According to Saunders, Lewis, & Thornhill, (2012, p. 674) the research methodology chosen dictates both the *"theoretical and philosophical assumptions upon which research is based and the implications of these for the method or methods adopted*".

The purpose of this chapter is to outline the methodology undertaken by the author in order to conduct the research, produce the research dissertation and accomplish the study's three primary objectives:

1. To critically appraise current literature available on veterinary occupational health and safety.
2. To investigate where the majority of Irish veterinary practices currently source their occupational health and safety information and advice.
3. To critically assess how specific occupational health hazards (seven in total) are currently managed within Irish veterinary practices.

3.2 Research Purpose

According to McGivern (2006) "*research is often categorised according to its purpose into three types of inquiry: exploratory, descriptive and explanatory*". An exploratory enquiry is useful for identifying a problem, clarifying it and defining the scope of the

problem in order to gain a greater understanding of the issue and identify possibilities for further research (McGivern, 2006, p. 88). Descriptive research can be defined as "*research for which the purpose is to produce an accurate representation of persons, events or situations*" (Saunders, Lewis, & Thornhill, 2012, p.669). Saunders, Lewis, & Thornhill (2012, p. 670) also define explanatory research as "*research that focuses on studying a situation or a problem in order to explain the relationship between variables*". Subsequently, the author believes that this study is exploratory in nature due to the overarching research aim which is to examine the current management of Occupational Health and Safety within Irish Veterinary Practices with a view to suggesting areas for improvement/further research.

The author believes that the application of a descriptive inquiry would not be suitable for this study because to merely outline and explain the current management of occupational health and safety in Irish Veterinary practices without providing a comparison to international practice would not provide a sufficient in-depth understanding of the current situation nor allow for valuable conclusions/recommendations to be established.

3.3 Research Philosophy

As outlined in Saunders, Lewis, & Thornhill, (2012, p. 127) the term research philosophy "*relates to the development of knowledge and the nature of that knowledge*". According to Dyer (2003) and as cited in Saunders, Lewis, & Thornhill, (2012, p. 127) "*our values can have an important impact on the research we decide to pursue and the way in which we pursue it".* The research philosophy is an important

concept which provides the necessary foundation for choosing a suitable research strategy and subsequently the reseach methods to be utilised with that strategy.

The researcher sympathises with a pragmatic approach. Saunders, Lewis, & Thornhill, (2012, p. 678) defines pragmatism as " *a position which agrues that the most important determinant of of the research philosophy adopted is the research question, arguing that it is possible to work within both positivist and interpretivist positions. It applies a practical approach, intergrating different prespectives to help collect and interupt data*".

3.4 Research Approach

Saunders, Lewis, & Thornhill, (2012, p. 48) maintain that research is usually approached by either testing a theory or developing a theory. These two main research approaches are known as inductive and deductive. According to Cameron & Price, (2009, p. 75) "*deductive research starts with a theory, and proceeds by testing hypothesis derived from that theory*" whereas "*inductive research starts with the observations and derives theory from these*".

The author felt that to exclusively use a deductive approach was not suitable for this study due to the limited amount of previous literature on Veterinary Occupational Health and Safety from which a theory or hypothesis could have be deducted and examined. However, she believed it would be advantageous to utilise elements of the deductive approach within the data collection methods chosen. Therefore the author decided upon utilising a combination of both approaches in a bid to improve the quality of the research. Saunders, Lewis, & Thornhill, (2012, p. 148) acknowledge the benefits

associated with adopting this combination approach suggesting that it is not only possible but that in their experience "*often advantageous to do so*".

Deduction was employed during the semi-structured interviews and also when designing the questionnaire; by including questions which tested common recurring trends, issues and themes highlighted by the literature reviewed in Chapter Two. Induction, on the other hand was presented throughout this study through the use of open-ended questions and the inclusion of new issues/topics within the questionnaire but largely through the use of semi-structured interviews. This encouraged the emergence of novel and original themes and trends from which the author is optimistic innovative and/or revised theories and hypothesis may be developed for further research in the future.

3.5 Research Strategy

A research strategy can be defined as the "*general plan of how the researcher will go about answering the research question(s)*" (Saunders, Lewis, & Thornhill, 2012, p. 680). Denscombe, (2010, p.4) describes research strategies as the " *types of equipment that allow relevant data to be collected*". As outlined in Saunders, Lewis, & Thornhill, (2012) the selected research purpose, philosophy and approach will subsequently influenece the authors choice of research strategy. Therefore, after careful consideration of the various options available, her chosen research purpose, philosophy and approach the author has opted to adopt a mixed methods strategy. The author is confident that this metholodogical choice is the most appropriate in complimenting her overall research design.

3.5.1 Mixed Methods Strategy

Denscombe, (2010, p. 137) describes a mixed methods strategy as one which "*crossess the boundaries of conventional paradigms of research deliberately combining methods drawn upon from different traditions with different underlying assumptions*". The central distinguishing characteristic of a mixed methods strategy is its use of both qualitative (non-numerical) and quantitative (numerical) techniques. In relation to this study, the author concurs with the belief highlighted by Denscombe, (2010, p. 138) that "*treating qualitative and quantative approaches to research as incompatible opposites is neither helpful nor realistic when it comes to research activity*". In adopting a mixed method strategy the author aims to afford herself the ability to utilise alternative appropriate methods thoughout the research process if and when required while also permitting the research objectives to be fulfilled.

3.6 Data Collection Methods

After considering the research objectives and overall research design the author chose to utilise a combination of two data collection tools in order to conduct this research; an on-line, self-administered, semi-structured questionnaire and several semi-structured interviews. The author acknowledges that there were alternative data collection tools, such as a focus group or on-line focus group, which may have enhanced this study further. According to Denscombe, (2010, p. 177) "*focus groups can be costly and time-consuming to arrange*", so due to limitations on both time and budget the author decided not to employ in this particular data collection tool. In the following sections the author aims to provide a rationale for her specific data collection method choices while also outlining some of the possible issues relating to same.

3.6.1 Questionnaires

According to many published authors including Saunders, Lewis, & Thornhill, (2012) questionnaires are one of the most commonly used data collectioin methods available. Groves, et al. (2009) states that the earliest type of survey was probably the census.

Saunders, Lewis, & Thornhill, (2012, p. 679) define questionnaires as a data collect method "*in which a person is asked to respond to the same set of questions in a predetermined order*". This corresponds with previous definitions such as those provided by Cameron & Price, (2009, p. 334) who define questionnaires as " *a standard set of predetermined questions presented to people in the same order*", Groves, et al. (2009, p. 217) who refer to questionnaires as "*a standardised set of questions administered to the respondents in a survey*" and also those of Denscombe (2010).

In this research the author chose to utilise the questionnaire as one of her data collection methods. Both the rationale and limitations of this choice are discussed and justified below.

3.6.1.1 Questionnaire Rationale

After careful consideration of all the data collection methods available the researcher chose to utilise the questionnaire technique within this study in order to collect standardised responses from a larger, more diverse sample of Irish Veterinary Practices. The ability to reach and obtain data from a wide variety of Veterinary Practices within Ireland was critical to this study in order to provide a more accurate, holistic view of the current occupational health and safety management practices employed and in order to increase the probability of more generalisable overall findings.

A self-administered, on-line questionnaire was administered through Google Drive which allowed the author to save time and funds on distribution yet reach a larger, more diverse sample group. Please see Appendix One for a copy of the questionnaire administered. It also provided the author with a platform to easily analyse the data gathered and represented results into graphical diagrams where appropriate. This improved data accuracy as human error was eliminated by automating the process of data entry. The use of a self-administered, on-line questionnaire also provided the author with the advantage of ensuring particularly important questions on the survey were mandatory and required an answer in order to submit the completed form.

In order to enable the author to compare and contrast the data obtained and to generate accurate overall findings all respondents were administered the same set of questions in the same order. With a view to protecting the anonymity of the repondents, maximising honest responses and improving reponse rates the questionnaire administered was anonymous and contained no identifying questions, codes, numbers etc. The author believes this provided participants with the necessary reassurance of privacy and encouraged them to be open and honest in their responses.

3.6.1.2 Questionnaire Limitations

The author recognises that every data collection method has its limitations and has endeavoured to outline below the limitations she encountered while utilising the questionnaire as a data collection tool.

The author was concerned that due to the very busy nature of veterinary practice there was a possibility that the questionnaire may be dismissed and the overall response rate

might be low. This could in turn reduce the generalisability of the study. In a bid to offset this potential issue the author considered five main areas;

1. The author provided a detailed cover letter with the questionnaire introducing herself and her veterinary industry experience, explaining the nature and the purpose of the study, assuring respondent confidentiality and anonymity and thanking participants in advance for their time. Please see and Appendix Two for a copy of the introductory e-mail sent.
2. The researcher sought to make the task of completing the questionnaire as straightforward and quick as possible. Personally she felt it might be less demanding for respondent to merely tick the appropriate boxes and that by employing this approach she might encourage more participants to complete the survey. To avoid respondent frustration or restriction of answers the author also included an 'other' answer box with a text box for further explanation under each of these questions.
3. The author was also mindful about the length of the survey and endeavoured only to include those questions which she felt were crucial to effectively fulfilling the aims and objectives of this study.
4. The researcher piloted the questionnaire to gain an insight into the length of time required to complete the questionnaire and reviewed the questionnaire accordingly prior to its administration.
5. The author also sent several e-mail reminders after specific time intervals to each veterinary practice within the sample. Because the questionnaire administered was anonymous it was impossible to determine which members of the sample had already responded therefore e-mail reminders were sent to each individual veterinary practice within the sample group. These e-mail reminders

thanked those practices who had already participated and apologised for contacting them again explaining because of the anonymous nature of the survey that it was impossible to determine which practices had already responded. It also included a gentle reminder to those veterinary practices who had not yet replied to consider participating as their input was vital to the success of the study.

Due to the lack of personal, face-to-face contact with the respondents during the completion of self-administered questionnaires there is also the possibility that they may not be completed honestly and accurately. Unfortunately, without personally administering the questionnaire through face-to-face meetings with each individual respondent there is no possible way to measure if this occurred. Nevertheless, the author had to restrict her research to what she felt was both realistic and feasible. However, by highlighting the importance of ensuring respondent anonymity and confidentiality within this study, by emphasising that all data collected would be treated in the strictest of confidence and by outlining the data storage methods employed the researcher endeavoured to reassure participants and encourage them to respond in an open and honest manner.

3.6.1.3 Questionnaire Design

According to Cameron & Price, (2009, p. 338) there are two essential elements in successful questionnaire design; the content and the design.

The objective of this study was to produce a clear, concise questionnaire which could be completed easily, quickly and accurately by the respondent while still gathering the required quality data for analysis. As highlighted in the previous section the researcher

was mindful of the length of the questionnaire and the type of questions included. Therefore the author first developed a set of clear questionnaire objectives. Then utilising both the original questionnaire distributed by the study's key seminal text, *Management of occupational health risks in small-animal veterinary practices* by D'Souza, et al., (2009), the on-line 'Riskequip' hazard checklists (Guild Insurance, 2013) and the researcher's four chosen categories of occupational health and safety risks (physical, biological, chemical and psychosocial hazards) as a reference guide, the researcher designed her questionnaire.

The questionnaire consists of a range of question types including open, closed, multiple choice and yes or no questions. The decision was made to use a range of question types in order to make the task of completing the questionnaire as convenient as possible for the respondent while still gathering quality data which fulfilled the research aims and objectives.

3.6.1.4 Questionnaire Pilot Testing

In order to facilitate the construction of a clear, concise questionnaire which would yield quality data the researcher decided to conduct a pilot test of her questionnaire prior to distribution to all potential participants. Many authors including Saunders, Lewis, & Thornhill, (2012) encourage the use of such pilot testing in order to refine, validate and assess the likely reliability of your questionnaire prior to distribution. Ultimately, conducting pilot testing prior to the distribution may identify potential issues thus improving the success of your of the final questionnaire (Bell, 2010b).

The draft questionnaire was circulated among a small, select group of practicing veterinary surgeons, veterinary nurses and veterinary practice managers to complete

and their critique and feedback on its layout and design was requested. Comments and suggestions were noted. As a result of the pilot testing conducted, the researcher gained valuable insights into aspects such as importance of the wording utilised in posing questions, respondent preferences and the length of time required to complete the questionnaire. Subsequently, the necessary adjustments were made to improve the final layout, wording and length of the questionnaire prior to its distribution to the entire chosen sample.

3.6.1.5 Questionnaire Sampling Technique

Due to restrictions in time and resources, the author acknowledged that gathering data using a census was neither a logical nor feasible option and that selecting a sample of the overall target population was a more practical and rational approach. According to Cooper & Schindler, (1998, p. 72) a sample is defined as " *a part of the target population, carefully selected to represent the population*". Samples can either be chosen on the basis of probility sampling or non-probability sampling. According to Salkind (2012, p. 96) probability sampling refers to "*the likelihood of any member of the population being selected is known*" whereas non-probability sampling refers to "*the likelihood of any member of the population being selected is unknown*".

The researcher chose to apply non-probability sampling to this study, using a systematic random sampling technique. The rationale behind this decision was due to the fact that every member of the target population was suitable to participate in this questionnaire but that due to restrictions on time and funds a census study was not feasible at this time. Therefore the author felt the most appropriate approach was to select a systematic random sample which would allow for generalisation of the overall findings.

In order to establish the population of registered veterinary premises in Ireland the author first contacted the Veterinary Council of Ireland for an up-to-date list of all the registered veterinary practices, clinics and hospitals within Ireland to include their contact details. As of July 2013, the Veterinary Council of Ireland had 717 registered veterinary premises on its records. Once this list was obtained from the Veterinary Council of Ireland the researcher then chose to distribute the questionnaire to every seventh veterinary practice on the list. This was achieved by choosing a starting point at random and then selecting every seventh veterinary practice thereafter to establish the final questionnaire mailing list of 108 practices.

3.6.1.6 Questionnaire Distribution

A self-administered on-line questionnaire was generated in Google Drive. A hyperlink to the questionnaire was then e-mailed to veterinary practices along with a cover letter introducing the researcher, outlining her veterinary industry experience, explaining the nature and the purpose of the study, outlining data storage methods, assuring respondent confidentiality and anonymity and thanking participants in advance for their time and valuable input.

In line with recommendations on netiquette outlined in Saunders, Lewis, & Thornhill, (2012) a follow-up e-mail was sent one week after distributing the original questionnaires and a second follow-up message was sent two weeks after this. In relevant cases, where veterinary practices within the sample group engaged in social media (i.e. possessed a Facebook page) this was also used to promote the questionnaire. In cases where the veterinary practice did not engage in social media the researcher telephoned the practice to ensure they received the original questionnaire, answered any questions they may have had in relation to the study and explained how each practices

input was vital to the success of her study. A final reminder and thank you message was sent out six weeks after the distribution of the original message and questionnaire.

3.6.2 Semi-structured Interviews

Saunders, Lewis, & Thornhill, (2012, p. 372) define the research interview as " *a purposeful conversation between two or more people, requiring the interviewer to establish rapport, to ask concise and unambiguous questions, to which the interviewee is willing to respond, and listen attentively*". Interviews are considered by many authors as useful data collection tools which produce "*incredibly rich and illumanating data*" (Cameron & Price, 2009). Interviews can be used to collect both qualitive and quantitative data.

As outlined in Saunders, Lewis, & Thornhill, (2012, p. 374) there are numerous typologies used to categorise interviews. One common typology used categorises interviews as either; structured, semi-structured or unstructured interviews. The author has chosen to utilise semi-structured interviews for the purpose of this study. Semi-structured interviews are defined as a " *wide-ranging category of interview in which the interviewer commences with a set of intervie themes but is prepared to vary the order in which questions are asked and to ask new questions in the context of the research situation*" (Saunders, Lewis, & Thornhill, 2012, p. 681).

3.6.2.1 Semi-structured Interviews Rationale

According to Cameron & Price, (2009, p. 253) semi-structured interviews allow the interviewer "*to reword questions, to draw out discussions or to go through the questions out of sequence if that is the way in which the discussions develop*".

The author personally felt that using semi-structured interviews would provide her with a degree of flexibility in order to enable the development of discussion, elboration on areas of interest, clarification of fague responses and collection of rich data. A semi-structured approach was favoured by the researcher in order to facilitate the collection of more personalised, in-depth, rich data which included participants personal views and opinions on the subject matter. This methodology also encouraged the introduction of novel themes and alternative topic areas by both the participant and the researcher which otherwise may have gone undocumented.

The reseacher conducted four interviews; one with a veterinary health and safety expert/practising veterinary surgeon (large animal practice), one with a practising veterinary surgeon (mixed practice), and two with practising veterinary nurses (one mixed practice and one small animal practice). These individuals were selected by the author as she felt their veterinary experience and broad working knowledge of health and safety would provide valuable insights into current occupational health and safety management within Irish veterinary practices.

Largely by request and to accomodate the busy interviewees but also due to advantages associated with access, time, resources and reduced costs the researcher agreed to conduct the semi-structured interviews via the telephone. According to Bryman & Bell, (2007, p. 214) telephone interviews are " *more or less as representative as face-to-face surveys*". This is rather significant as according to Taylor (1997) and as cited in Bryman & Bell, (2007, p. 214) " *it is not very long since telephone surveys were regaded as a cheap and dirty substitute for face-to-face interviewing...*". It was also acknowledged that conducting interviews via the telephone can help combat the phenomenon, often

experienced with face-to-face interviews, whereby participants replies are sometimes influenced or affected by characteristics of the interviewer for example ethnicity or fashion sense (Bryman & Bell, 2007).

Before conducting each interview the researcher sent each individual interviewee a copy of the participant information sheet to read along with a consent form to complete and return before the scheduled interview date. The participant information sheet was read out by the researcher to the interviwee before each interveiw to ensure each participant fully understood the nature of the study and voluntarilarly wished to proceed with the scheduled interview. Interviews lasted between forty-five and sixty minutes, were recorded using a dictaphone and were directly transcribed using Microsoft Word. Please see Appendices three to six for interview transcripts.

3.6.2.2 Semi-structured Interviews Limitations

The author recognises that there may have been other individuals who could have participated in the interview process thus providing additional contributions of knowledge to this study. However, due to constraints on time and resources and in order to ensure the study's feasibility certain restrictions were necessary.

The researcher also recognises that as with questionnaires, the issue of honesty and accuracy is also a concern when conducting interviews. However, the author believes she has sufficiently tackled this issue by favouring a semi-structured approach which allowed participants to partially lead the interviews with their own personal views and opinions.

3.7 Ethical Considerations

Research ethics is defined as "*the standards of the researcher's behaviour in relation to the rights of those who become the subject of a research project, or who are affected by it*" (Saunders, Lewis, & Thornhill, 2012, p. 680). As outlined in Denscombe, (2010) the core principle of research is that "*the ends do not justify the means in the pursuit of knowledge*". Fundamentally, the issue of ethics must be given careful consideration during all aspects of a research project in order to ensure all data is obtained voluntarily and with consent, the transparency of the study is upheld and that the welfare of all participants is prioritised and protected at all times (Denscombe, 2010, p. 329 - 342).

The author endeavoured to employ good ethical practices at all times during this research project and followed a deontological view throughout. The main ethical issues faced during this research were in ensuring informed participation and consent, anonymity of responses, and confidentiality. In order for the integrity of this study to be maintained to the highest levels, the author addressed these issues in the following ways: Involvement in this research project was on a purely voluntary basis. The author developed a participant information sheet which was intended to help inform all participants of the nature and the purpose of the research and to ensure potential participants were fully informed before agreeing to participate in this study See Appendix Seven for a copy of the Participant Information Sheet used by the author.

The interviewee received a copy of the above participant sheet and was also required to sign a written consent form. See Appendix Eight for a copy of the Interview Participant Consent Form used by the author. Privacy, confidentiality and anonymity were of utmost importance to the author throughout this study and were strictly maintained

where possible. The author designed the on-line questionnaire so that all responses would be completely anonymous - there were no identifying questions, codes, numbers etc. in use. This was done in a bid to encourage practices to participate honestly in the study without having any reservations. A professional and impartial approach was taken at all times when conducting this research.

A research limitations section has also been included below in a bid to acknowledge the reality of the limitations within this study and their subsequent influence on the research approach taken and final results generated.

3.8 Research Limitations

Research limitations can be defined as the "*those characteristics of design or methodology that impacted or influenced the application or interpretation of the results of your study. They are the constraints on generalisability and utility of findings that are the result of the ways in which you chose to design the study and/or the method used to establish internal and external validity*" (University of Southern California , 2013).

Despite methodical planning and preparation, limitations are an element of any research project and the author acknowledges that this study is no exception. In the previous section the author highlighted some of the possible disadvantages of utilising specific data collection tools. Throughout this study the author was mindful of these weaknesses and has endeavoured to address them to the best of her ability to ensure that the quality of the research was not undermined.

The author acknowledges that there were alternative options available when choosing the research methods and data collection tools utilised within this study, which had the potential to direct this research in an alternative manner. However, having comprehensively studied and reviewed the alternatives available, the author selected those which she believed were most suited to realising the research objectives within the given time frame. In previous sections throughout this chapter the author has outlined and rationalised her aforementioned choices and is confident that they are the most appropriate for this study.

During this investigation, the author was mindful that a certain element of self-reporting bias was a potential concern in research of this kind, both on the part of the participants and also the author. There did appear to be considerable willingness on the part of all participants who were interviewed and surveyed to share their candid opinions, which has helped provide valuable insights into contemporary health and safety management in Irish Veterinary Practice. In relation to data collection, the author also recognises that there may have been other participants who could have provided addition contributions of knowledge to this research. However, due to time and resources constraints and in order to ensure the study's feasibility it was necessary for the author to restrict her research.

Although beyond the scope of this study, the author acknowledges that collaborating with the Health and Safety Authority in order to issue all registered Veterinary establishments in Ireland with a compulsory self-administered survey would have dramatically improved the overall response rate and provided a more comprehensive review of the management of occupational health and safety within veterinary Practices.

3.9 Conclusion

The aim of this chapter was to explain and justify the research methodology utilised during the course of this research project. The chosen research philosophy, approach, and strategy have all been discussed and justified along with the data collection methods, their advantages and disadvantages. The author has also included a discussion on the ethical considerations and limitations of this research project.

Throughout the research project the author continually referred back to the study's main aim and objectives to ensure the methodology employed was suitable and continued to ensure the three main research objectives would be effectively satisfied. The next chapter will illustrate the key findings of the primary research conducted by the author during this study, excluding all the redundant data which is of no relevance to the study.

Chapter Four: Analysis of Findings

4.1 Introduction

In this chapter the author will present the findings of her research in relation to the management of occupational health and safety in Irish veterinary practices. As discussed in Chapter Three the data presented below was obtained by the researcher through the distribution of an on-line questionnaire using a systematic random sample of Irish veterinary practices as well as from conducting four semi-structured interviews with a selection of veterinary professionals (2 x practising veterinarians and 2 x practising veterinary nurses). Therefore the overall objective of this chapter is to present an analysis of the data collected converting it into valuable and functional knowledge.

In a bid to increase the validity and credibility of her study the author chose to utilise a method known as triangulation, gathering both qualitative and quantitative data using two main data collection tools; an self-administered on-line questionnaire and semi-structured interviews. According to Bryman, (2004, p. 1) "*Triangulation refers to the use of more than one approach to the investigation of a research question in order to enhance confidence in the ensuing findings*". In order to analysis the data gathered from the research the author employed the techniques outlined in Chapter Three.

4.1.1 Research Objectives

To recapitulate, the three primary objectives of this study are;

1. To critically appraise current literature available on veterinary occupational health and safety.
2. To investigate where the majority of Irish veterinary practices currently source their occupational health and safety information and advice.

3. To critically assess how specific occupational health hazards (seven in total) are currently managed within Irish veterinary practices.

The first objective is largely addressed in Chapter Two where the author aims to provide context for this study by presenting the reader with a comprehensive review of the available literature on veterinary occupational health and safety. During the literature review the author also analysed several texts which proved influential in the design of her on-line questionnaire (especially D'Souza et al, (2009)) and which at times, also directed the conversation during the semi-structured interviews conducted by the author. The author felt that this approach was crucial in order to provide an opportunity for the emergence of new findings while also testing the results of both previous and current studies.

The second objective looks at where Irish veterinary practices currently source health and safety information and advice. The author wished to examine this area so as her research could be of some practical benefit to the veterinary profession. The author sought to fulfil this objective during the data collection and analysis stages of this research project.

The final objective is the foundation of the research as it largely addresses the overall aim of this study. The author acknowledges that it was therefore crucial for the research aim and objectives to be well-defined and in focus from the onset of the study. This she feels will ensure consistency, facilitation and fulfilment of same. In the authors opinion evidence of the final objective can be found throughout the data collection process. The subsequent sections will present the reader with the findings of the primary research

conducted by the researcher, collating the data gathered from both data collection tools utilised.

4.2 Quantitative Research

The findings presented below represent data accumulate through the use of a self-administered, on-line questionnaire which was distributed to a systematic random sample of Irish veterinary practices. The author will first develop a general profile of the responding practices and will then outline this study's findings in relation to their responses addressing each research objective in turn.

4.2.1 Profile of responding Veterinary Practices

A total of 108 questionnaires were distributed to a variety of Irish veterinary practices of which 56 practices responded. All completed surveys were serviceable giving a final response rate of 52%. Section one of the questionnaire; *Practice Background Information* was designed to include introductory questions in order to develop a basic profile of the veterinary practices participating in this research.

The chart below illustrates the diverse classification of responding practices. There appears to be a significant disproportion in the types of veterinary practices surveyed, with the prominent practice types being; small animal (50%) and mixed-animal practice (34%) respectively. However, it is in actual fact rather representative of the current distribution of veterinary practices in Ireland. Therefore, meaning it is possible to examine the occupational health and safety practices of numerous different types of veterinary practice while also providing more generalisable results.

Figure 4.1: Practice Type

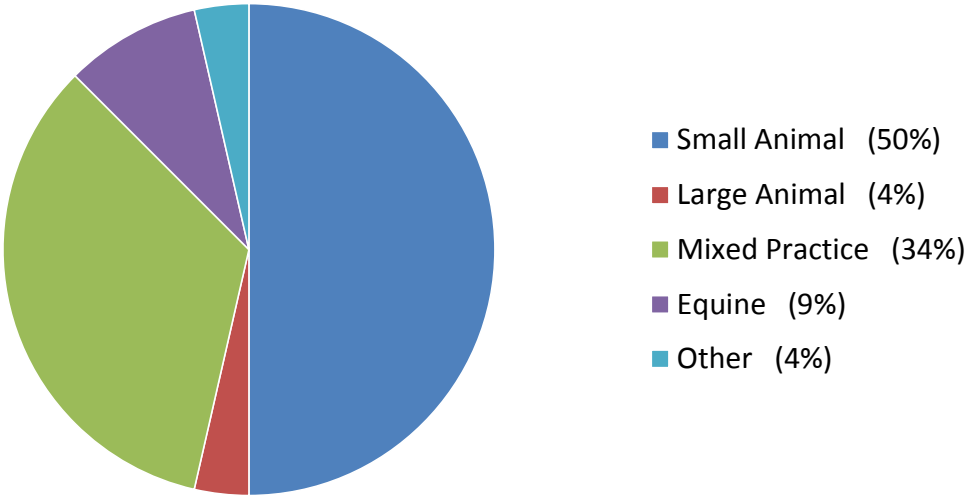


Figure 4.2: Classification received from the Veterinary Council of Ireland (VCI), under the practice accreditation scheme

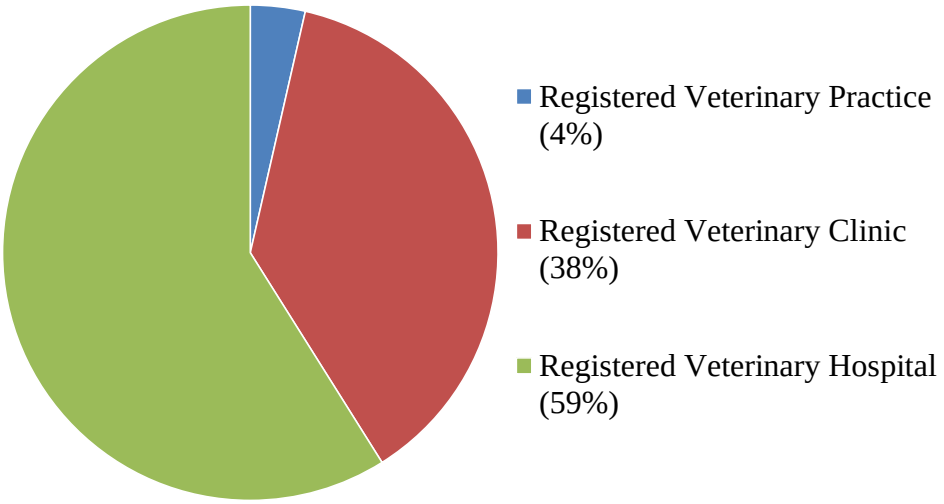


Figure 4.2 above illustrates the official classification awarded to the responding practices by the professions governing body; the Veterinary Council of Ireland (VCI), under the practice accreditation scheme. The majority of responding practices (59%) were awarded Registered Veterinary Hospital status, which is the highest possible

accreditation for veterinary premises. Twenty-one of the responding practices (38%) were accredited with Registered Veterinary Clinic status with the remaining two practices (4%) receiving the lowest accreditation - Registered Veterinary Practice. As outlined in Part 9 of the Veterinary Practice Act, (2005, p. 77) every veterinary premises in the State must be registered. As a result the Veterinary Council of Ireland (VCI) has developed a registration process which involves a premise inspection, called the Premises Accreditation Scheme (PAS). This accreditation inspection requires a minimum set of health and safety standards to be met before the premises can be accredited. Therefore, assessing the practices accreditation status provides a reference point for the current level of occupational health and safety standards which should be present within the responding veterinary practices. Another significant finding established from the data collected in 'Section One' of the questionnaire was that on average Irish veterinary practices employ 8.78 people per practice.

4.2.2 Sources of Health and Safety Information and Advice

Section two of the on-line questionnaire, *Sources of health and safety information and advice*, was developed with primary objective number two in mind. As previously stated the second objective aims to establish where Irish veterinary practices currently source health and safety information and advice. The percentage breakdown of respondents who indicated using the current resources provided by The Health and Safety Authority are shown in Figure 4.3. The most commonly cited external sources currently utilised, other than The Health and Safety Authority, are outlined below in Table 4.1. This data allows the general awareness of the responding practices in relation to the current sources of occupational health and safety information and advice to be assessed.

Figure 4.3: Percentage usage of the Health and Safety Authority (HSA) resources to source occupational health and safety information

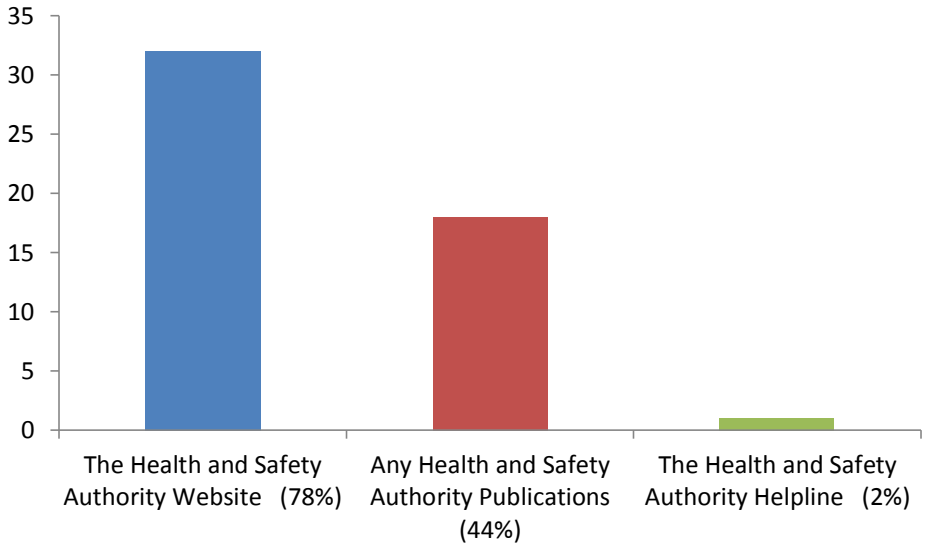


Table 4.1: Percentage usage of external sources of occupational health and safety information

Additional External Sources Listed	No. of respondents who utilised this source	% of respondents who utilised this source
Other Veterinary Practices	4	7%
Internet	3	5%
Articles in the Veterinary Journal of Ireland	2	4%
Veterinary Ireland	11	20%
Private H & S Consultants	5	9%
Radiological Protection Institute of Ireland	1	1%
Clinical Waste Management Companies	1	2%
Continuing Professional Development (CPD) meetings	5	9%
Veterinary Defence Society (VDS)	1	2%
Dept. of Agriculture, Food & Marine	1	2%

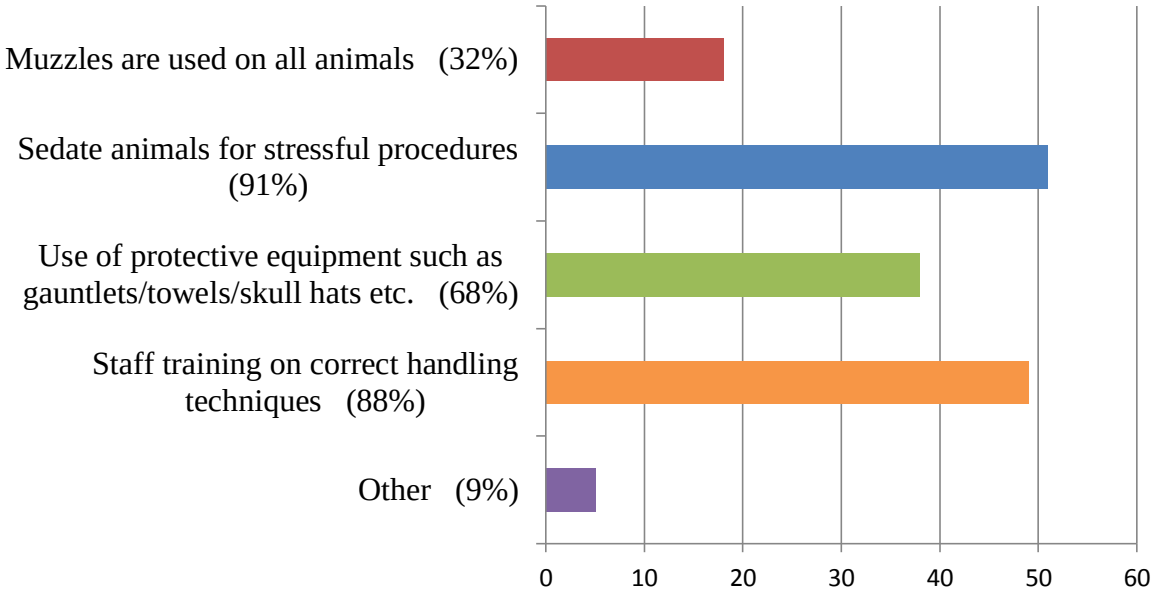
4.2.3 Assessment and Control of Occupational Health Hazards

Both section three and four of the on-line questionnaire were designed with primary objective number three in mind.

4.2.3.1 Animal kicks, bites and scratches

In total, 62.5% stated a risk assessment had been carried in relation to animal kicks, bites and scratches. Outlined below in Figure 4.4, are the measures implemented by practices in order to minimise the risk of animal bites, kicks and scratches.

Figure 4.4: Measures implemented in order to reduce the risk of animal bites, kicks and scratches within the practice

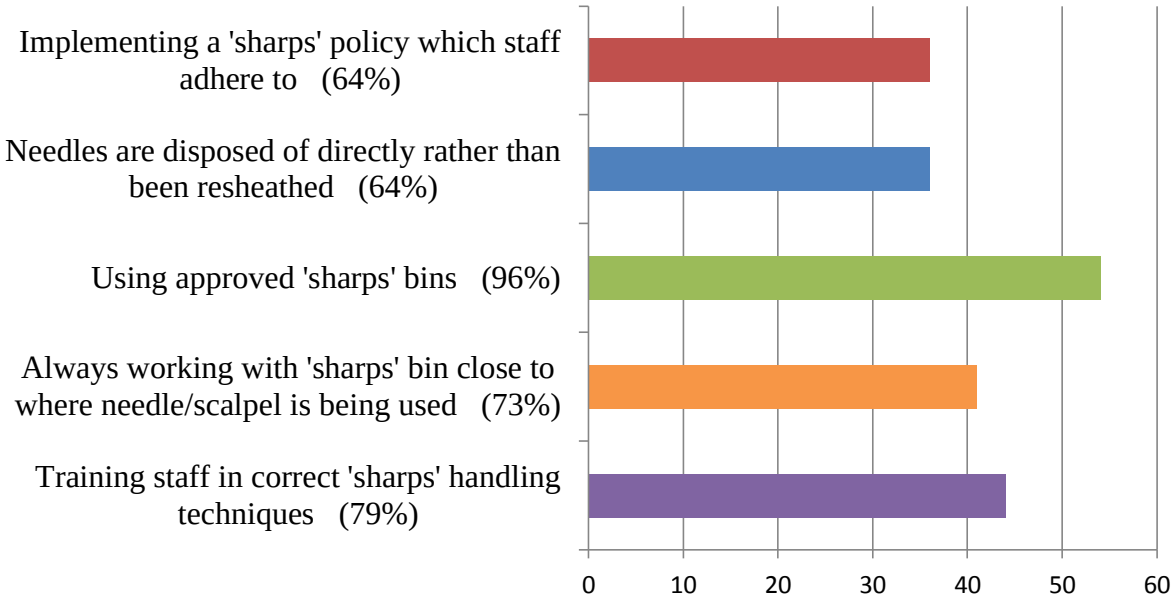


4.2.3.2 Needlestick Injuries

Only 62.5% of practices surveyed had conducted a risk assessment in relation to needlestick/sharps injuries. As for the procedures implemented by practices in a bid to

help reduce the risks posed by needlesticks and or sharps, the data gathered is demonstrated below in Figure 4.5.

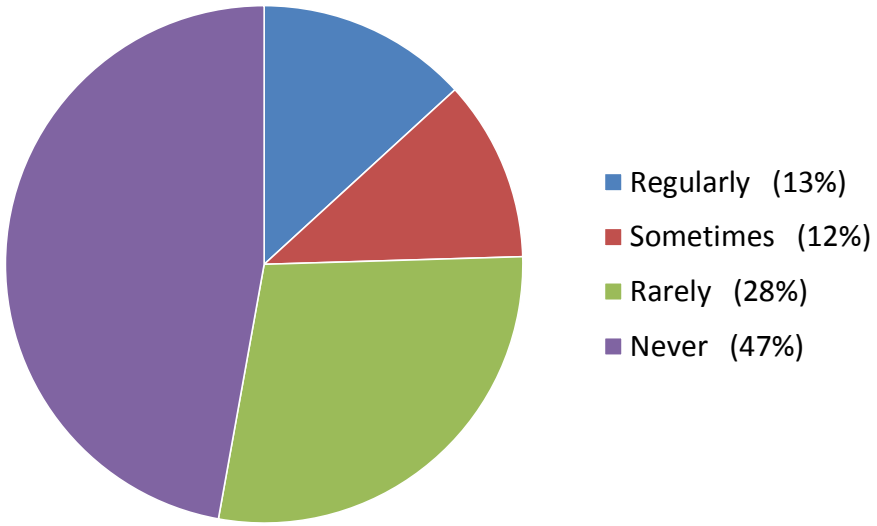
Figure 4.5: Measures implemented to minimise the risk from 'sharps' within the practice



4.2.3.3 Radiation

Of the responding practices, 95% (53 practices) of them stated using x-ray equipment. Of these fifty-three practices, 91% (48) had appointed a radiation protection officer, had also conducted a radiation risk assessment and made sure that their personnel wore dosimeters when working with x-rays. The fifty-three practices were also asked if manual restraint was ever employed during radiology. The responses received are set out below in figure 4.6.

Figure 4.6: Frequency of manual restraint used during x-ray on an animal

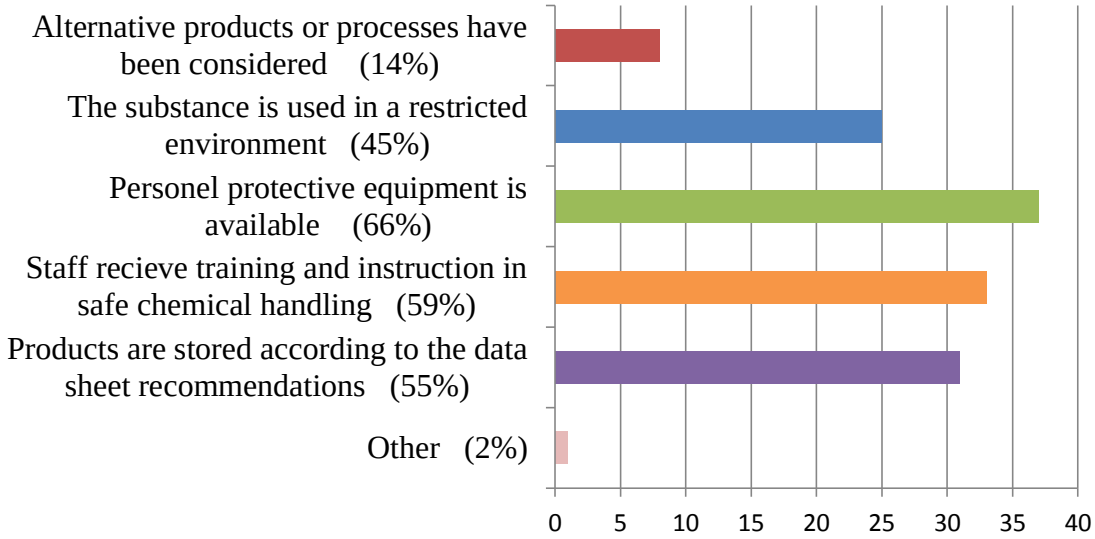


4.2.3.4 Chemicals

Sixty-eight per cent of practices surveyed used formaldehyde, fifty per cent used prostaglandins (50%), and sixteen per cent used ethylene oxide. However, only, 45% of these practices reported having conducted a risk assessment in relation to the aforementioned hazardous chemicals.

In addition, respondents reported implementing safety measures, as outlined in Figure 4.7, in a bid to minimise the risks posed by hazardous chemicals. The 2% of responding practices who responded 'other' in Figure 4.7 below stated the practice placed restrictions on which personnel are allowed to handle hazardous chemicals.

Figure 4.7: Measures implemented by the practice in order to reduce the risk from each of the chemicals listed above

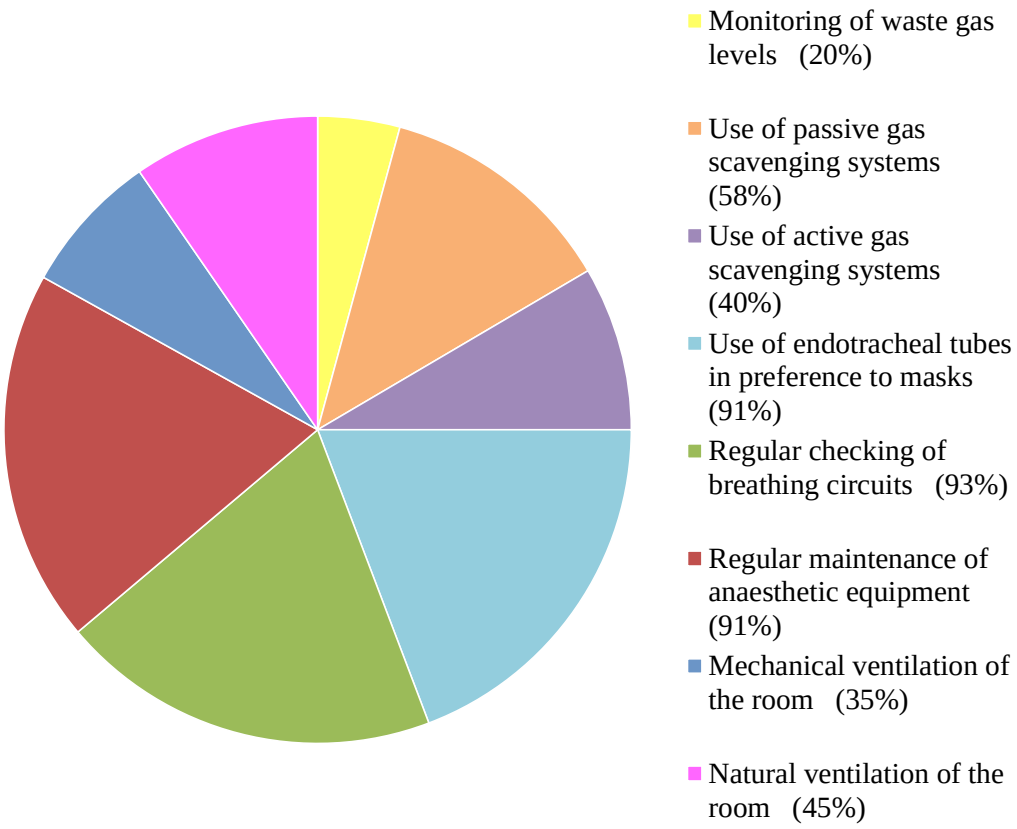


4.2.3.5 Waste Anaesthetic Gases

Ninety-eight per cent of all practices surveyed reported using gaseous anaesthesia. The most common anaesthetic gas used among these practices was Isoflurane (93%). Of the fifty-five practices (98%) who reported using gaseous anaesthesia, 73% stated a risk assessment had been conducted within the practice, in relation to this occupational health hazard.

The findings in relation to control measures employed by the responding practices in order to minimise the risks associated with waste anaesthetic gases are illustrated below in figure 4.8.

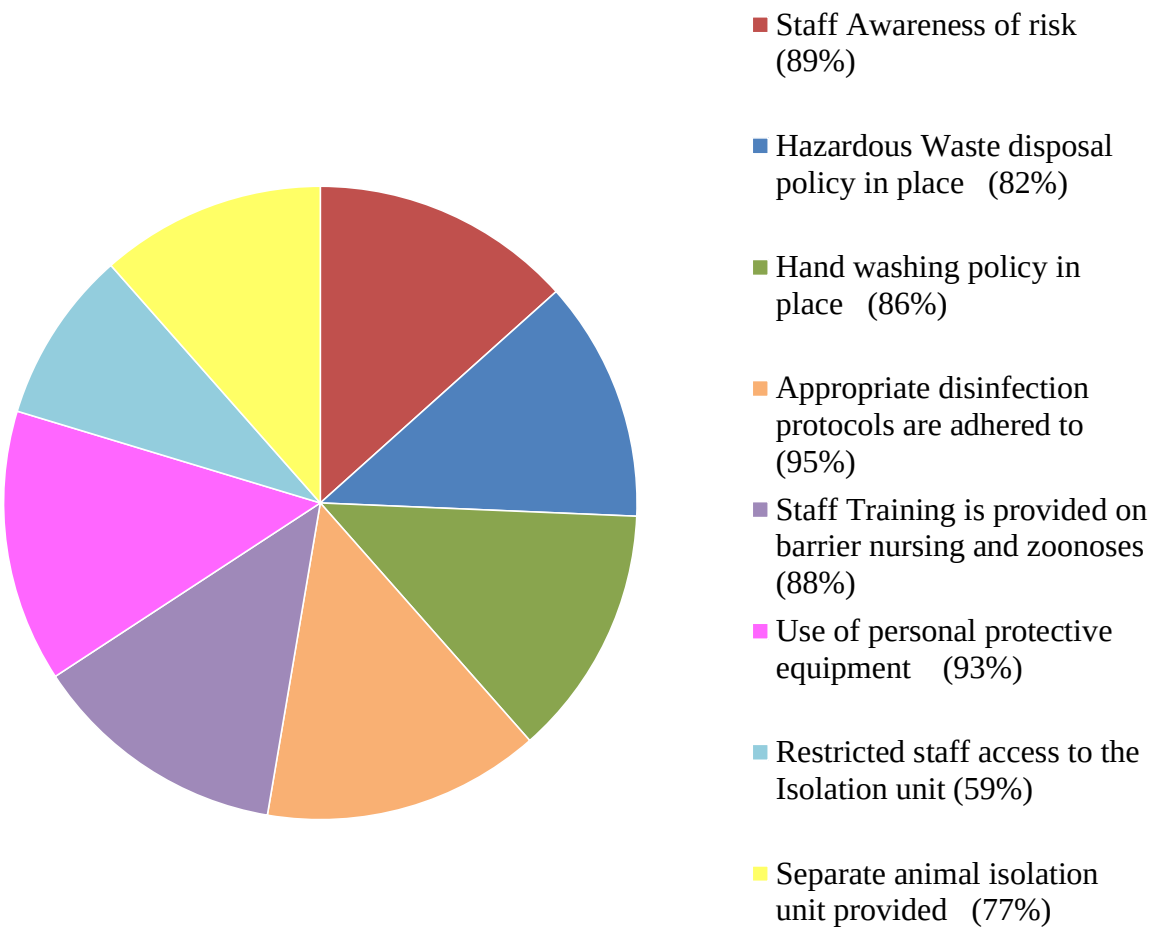
Figure 4.8: Control measures employed by the practices in order to minimise the risks within the operating theatre



4.2.3.6 Zoonoses

Sixty-four per cent of responding practices indicated that a risk assessment had been performed in relation to the zoonosis. Practices were again asked what measures had been implemented in order to minimise the risk of staff contracting a zoonotic infection. Figure 4.9 below illustrates the statistics for same.

Figure 4.9: Safety measures implemented by the practice in order to minimise the risk of zoonotic infections



A fraction of responding practices (14% or eight practices) also reported that a member of staff had contracted a zoonotic infection within the previous twelve months. The most prevalent disease contracted by staff members, was reported to be Dermatophytosis, commonly known as Ringworm (8 practices).

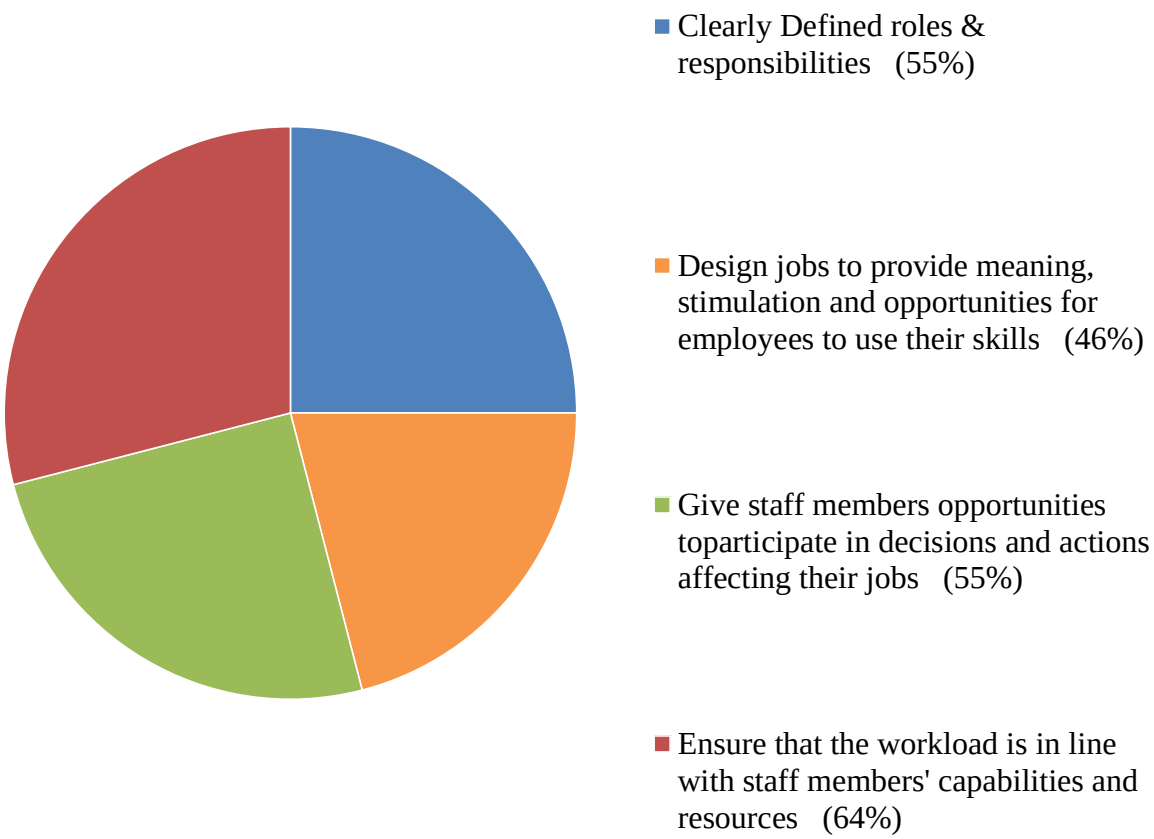
4.2.3.7 Occupational Stress

Seventy-seven of the practices surveyed had no policy on the management of occupational stress. The average hours worked per day were calculated as 7.6hrs/day for veterinary nurses and 8.9hrs/day for veterinarians. The majority of respondents also

stated over-time and out-of-hours' work were regularly required as part of their role. Results show that 79% of veterinary staff receive, on average, one to two breaks per day.

The top four measures, as cited by the surveyed practices, commonly implemented to reduce the risk of occupational stress among staff are illustrated below in Figure 4.10.

Figure 4.10: Top four cited measures implemented to reduce the risk of occupational stress



4.2.4 General Principles of Health and Safety Management

Section four of the questionnaire looks at how practices manage basic health and safety and was developed with research objective number three in mind. Ninety-eight per cent of responding practices reported having a written safety statement. Of these, 40% maintained having reviewed it with the last twelve months.

Of the fifty-five practices which reported having a written safety statement, 71% indicated that all staff members had seen, read and signed the statement. Of the practices surveyed, 79% reported having allocated a staff member responsible for health and safety within the practice. However, 32% of practices surveyed, stated that no staff member had completed any form of formal health and safety training.

A percentage of participating veterinary practices (64%) indicated that staff members are involved in risk assessments and or solving health and safety issues. However, 84% of respondents suggested that health and safety was considered before all new practices are employed. Participants detailed that 89% of them had a reporting and or recording system for work-related accidents.

On average each practice employed six female staff members. Additionally, 75% of responding practices stated that a pregnant worker would have a risk assessment conducted on notification of her condition. Thirty-nine per cent of practices surveyed recommended employee vaccination. Of this 39%, 95% recommended Tetanus vaccination to all staff members.

4.3 Qualitative Research

The findings presented below represent data gathered during interviews conducted by the researcher with a selection of members from the veterinary profession. Firstly, the author will provide a brief, individual participant profile. Subsequently, she will address each research objective sequentially, outlining this study's findings in relation to the interviews held.

4.3.1 Interviewee Profiles

The researcher conducted a total of four semi-structured interviews using the methodology previously described in Chapter Three, section 3.6.2.1. The interviewee profiles are as follows;

Interviewee One: Veterinary health and safety expert and practising veterinary surgeon with over 30 years veterinary experience.

Interviewee Two: Practising veterinary nurse with over 20 years experience and is currently employeed in a mixed-animal practice.

Interviewee Three: Practising veterinary surgeon, with in excess of ten years veterinary experience. This interviewee is also currently managing a mixed-animal practice.

Interviewee Four: Practising veterinary nurse with 5 years experience currently working in small animal practice.

This varied group of veterinary professionals was selected by the author as she felt their diverse veterinary experience and broad working knowledge would provide valuable insights into the current management practices currently employed within Irish veterinary practices.

4.3.2 Research Objective 2

Health and Safety Awareness and Current Sources of Health and Safety Information

During the semi-structured interviews the author sought to ascertain the current level of basic health and safety awareness within Irish veterinary practices. The author also sought to establish the current sources of health and safety information used by Irish veterinary practices. The responses gathered were two-fold. Interviewee number two stated "*.. I think they are aware of the risks but they just, they've got so much other stuff going on in their heads and so many other things to do they just don't think about them*". Similarly Interviewee number four stated "*I think usually they are fairly aware but I suppose it would be no harm to get additional training on it because it is a very important subject…*". However, interviewee number one and three stated that most practices are, in their opinion, probably not fully aware of the legalities involved.

When questioned in relation to the sources of health and safety information, interviewee three reported having previously received health and safety related information from Veterinary Ireland, the Veterinary Council, the Department of Agriculture and Teasgac. However, she also stated that in general, the practice did not receive a lot of information regarding health and safety which was targeted directly at vets. Similarly, interviewee one reported that in his opinion most veterinary practices sourced health and safety information "*….from the Health and Safety Authority website, from Veterinary Ireland, from attending Health and Safety Courses or from Peninsula..".*

When asked if, in their opinion, there was sufficient information and resources available to veterinary professionals on health and safety, again the responses were at variance. Interviewee number two stated "*Eh…there probably is but again nobody bothers to*

look at it". Additionally, interviewee one, stated "*Well... resources... well there is lots of information floating around eh experience is the main thing – your own common sense*". In contrast to both these views, interviewee number four replied "*No, I think it would be beneficial to get something more"* and suggested that possibly the "*Veterinary Council could add a specific web page dedicated to health and safety..*". Interviewee four indicated that, in her opinion this would provide "*easy access to information on veterinary health and safety issues"* and affirmed that she felt it "*would be beneficial*".

Interestingly, both interviewee one and three, respectively, both remarked during the course of their interviews that "*it is limitless what can go wrong*" and "*it's kind of scary when you think about what can potentially go wrong*" in relation to the number of occupational health hazards faced by veterinary professionals every day.

4.3.3 Research Objective 3

Management of Occupational Health and Safety Hazards in Irish veterinary practices.

Discussions on whether the interview candidates believed Irish veterinary practices currently manage health and safety appropriately were explored. Virtually, all of the interviewees declared they felt there was room for improvements to be made within current management practices of occupational health and safety.

Interviewee One: "*Ah well there is always room for improvement with everything. There is always room for improvement but that's the way.. there is always room for improvement".*

Interviewee Two: "*I think they could do more, part of it is lack of ..it starts at the top, and many don't have hard and fast rules and they don't insist people follow them. I*

think they're aware of the risks they just don't have policies and procedures." and *"It's little things ... like the lack of thought".*

Interviewee Three: "*Well I think we could all do with taking a look*…." and "*I might have been managing it all but it was nearly by default that I was managing it.*".

Interviewee Four expressed how she thought health and safety management probably varied a lot among Irish veterinary practices depending on the practice. However she also stated that she believed "*some aspects are well managed.."* such as disease control, zoonoses, and radiation.

4.3.3.1 Physical Occupational Health Risks

When questioned about occupational health hazards which they came up against in veterinary practice the majority of interviewees mentioned having been bitten or scratched at some stage.

Interviewee two verbalized that she had been "*bitten a couple of times*..." while interviewee three stated "*I've been bitten by a client's terrier*". Interviewee four explained how she had been scratched by a cat during the course of her work and that it had turned into "*a cat starch abscess*". However she also clarified that she had not obtained medical treatment and that the abscess had "*healed up*" of its own accord. Interviewee three concurred with interviewee one in relation to the risks associated with handling cats, stating that she often has to deal with "*a few cats that are less than sociable*".

Interviewee one mentioned how, in his opinion, the most common risks faced by Irish veterinary professionals today were probably animal attacks in large animal practices and in small animal practice – "*bites*" and "*chronic things like back injuries and things*

and issues to do with the back ". He also indicated that "*there is a lot of manual work in veterinary practice*". This suggestion is also supported by Interviewee two who agreed saying "*we do a huge amount of lifting*". Interviewee two also alluded to the risks involved and the lack of apparent management of this hazard in practice, stating that "*..nobody ever like sort of said this is the way we do things, this is our practice protocol*..".

Interviewee four, concurred, revealing how she felt that manual handling posed a huge threat to veterinary professionals who are always "*lifting things and moving around*" and she referred to manual handling as being, in her opinion, "*the most dangerous health and safety risk*". Interviewee three outlined her own personal policy on manual handling and implied that she didn't lift anything greater than 25kgs without help – "*But anything more than that or the more tricky ones we'd always make sure it was a two person or if there was a third person around, a three person job*".

Interviewee one also stated how he believed that "*the unpredictable nature of animals is a key thing*" in relation to occupational injuries and declared that he had "*nearly lost*" the tip of his finger three or four years previously while on attending to a cow in a crush. He also revealed that he knew of a colleague who had *"lost four fingers off his hand with a rope*" while at work. Further to this, he went on to describe how he had recently heard about a practice which employed five vets, where within "*the previous two years four of them had been off with injuries from animals"*. He also highlighted occupational driving-related accidents as a "*big issue*" especially among "*young vets*".

When questioned on the risks posed by sharps and or needlestick injuries, both interviewee one and four admitted having sustained a needlestick injury during the course of their work. Interviewee three described how she had learned her lesson very early on in her career, after sustaining a needlestick injury during her training, and stated how she had become more aware of this hazard thereafter. In contrast, interviewee four mentioned that she had recently sustained a needlestick injury which she "*didn't report*" because she felt that "*it was just a needle prick*" which had been acquired from "*a clean needle*" so she assumed "*it was fine*".

4.3.3.2 Chemical Occupational Health Hazards

When examined in relation to their exposure to hazardous chemicals including glutaraldehyde, formadehyde, prostaglandins, ethylene oxide and anaesthetic agents' interviewees two, three and four disclosed that they used one or more of these chemicals. Over the course of the interview, interviewee three stated she was exposed to formaldehyde, prostaglandins and the anaesthetic agent, Isoflurane during the course of her work. In relation to the use of formaldehyde, she acknowledged an awareness of the potential risks stating "*you obviously have to be careful handling it*" also mentioning that use of this product was limited and restricted to either herself or "*primarily the other assistant*" vet in the practice.

Interviewee two stated that she handled "*x-ray chemicals about once a month"* and that the practice used Isoflurane to maintain anaesthetics. Interviewee four acknowledged her use of both Isoflurane and formaldehyde, stating that she usually "*used gloves"* and that there had not "*been any incidents*" to report thus far. All three candidates reported using adequate scavenging systems and following the correct policies for the filling of anaesthetic agents.

4.3.3.3 Biological Occupational Health Hazards

In relation to zoonoses, Dermatophytosis (Ringworm as it is more commonly known as) was referred to by three of the participants. Both interviewee three and four had contracted Dermatophytosis. Interviewee three stated that she had contracted "*ringworm as a student*" but since being employed in practice had avoided a repeat infection, largely, because of her boss's strict policy on "*wearing gloves on calls and things*". She recognised that this had "*been a huge part in keeping..*" her "*..disease free*". In comparison, interviewee four admitted developing the infection from a stray "*little kitten*" which was in for rehoming. She outlined how about "half the staff got it".

Interviewee one also recognised the risks posed by zoonotic infections, stating that "*at one stage virtually every vet in the country had brucellosis if you went back 25 or 30 years*". He also suggested that ringworm "*would be quite frequent*" and highlighted that "*it would be reasonable to assume that*" MRSA might also be a risk in veterinary work. In contrast to the above three participants, interviewee two specified how she had never contracted any zoonotic infections throughout her 25 years within veterinary practice.

4.3.3.4 Psychosocial Occupational Health Hazards

The majority of the candidates interviewed possessed the view that occupational stress could definitely be a potential risk in veterinary. Interviewee three indicated that she believed "*stress and fatigue*" to be the biggest occupational health and safety risk in mixed animal practice during the spring months. In addition, she identified the "*anti-social*" and lengthy hours as a major factor in work-related stress, describing them as "*..a complete occupational hazard*". Interviewee three also stated that veterinary professionals "*tend to focus on the physical side not on the em mental or the emotional side of it*". She outlines how, in her opinion, "*someone who's feeling on the edge*

because they're burnt out because they've been working crazy hours..." is just as in need of consideration as those who sustain physical injuries.

Interviewee two and four both agreed that occupational stress was "*definitely*" a potential risk within veterinary. Each candidate alluded to how they believed the contributing factors to be a combination of the veterinary team, the extensive workload, the lengthy hours and the pressurised environment. Interviewee two suggested implementing a stress management module onto all the veterinary curriculums in order to provide new graduates with the necessary skills to cope in practice. Additionally, both interviewees three and four acknowledged being previous aware of the high suicide rates in veterinary but neither were personally aware of any colleagues who had committed suicide.

4.3.3.5 General Principles of Health and Safety Management

General principles of health and safety management featured largely in three of the four interviews conducted. Two out of the three interview candidates surveyed had an allocated staff member for health and safety. However, only one candidate claimed to have a member of staff who had attended a formal health and safety course. All three candidates confirmed their practice had a safety statement but only two of the three stated they had been required to read this document. Each of the three interviewees confirmed that they had not been required to sign the safety statement.

According to the candidates, accident report books were provided in all three practices. However, both interviewee two and four alluded to major under-reporting of minor accidents within veterinary practice.

Interviewee Two: "*..generally staff wouldn't record minor accidents..*".

Interviewee Four: "*We do have, yeah. It's barely used, I suppose we don't use it as much as we should, like not all incidents would be reported necessarily, you know like, scratches and bites and things that would happen often enough".*

When questioned on the reasons why veterinary staff tend to under-report accidents, interviewee four replied "*..you get so used to them and probably being busy and everything you don't have the time to take to go and write something that is going to be a little scratch or.. and you get so used to it that, you know, you wouldn't regard it as anything big".*

None of the practices in question recommended employee vaccination. In addition, only one of the three communicated that a pregnant worker would have a risk assessment completed on notification of her condition. In addition, interviewee two and three stated that they credit female staff with being more logical and hence more health and safety conscious.

4.4 Conclusions

The aim of this chapter was to present the findings from the primary research conducted by the author in relation to the management of occupational health and safety in Irish veterinary practices. Throughout this research project the author continually referred back to the study's main aim and objectives to ensure the methodologies employed were appropriate and that both the data gathered and the findings reported both satisfied the three main research objectives.

The author considers the above reported findings to have related to the overall aim and objectives of the study while also proving very fascinating and informative. Participants

frequently voiced and reported similar beliefs and opinions. In the researcher's opinion, identifying such a general consensus within the data gathered subsequently increases the validity and creditability of these findings. The next chapter will now present a discussion on and comparison of this study's findings with the extant literature reviewed in Chapter Two.

Chapter Five: Discussion

5.1 Introduction

The function of this chapter is to provide a detailed discussion of the main findings in relation to the relevant literature previously discussed in chapter two. The author also sought to relate the overall findings back to the main research aim and objectives. The author intends to compare and contrast her findings with those from previous research on veterinary health and safety. This chapter will highlight novel knowledge derived from this study while also including the personal opinions of the author.

5.2 Research Aim

The principal aim of this study is to address the lack of Irish data on the management of occupational health and safety in veterinary practices. The author sought to fulfil this by examining where the majority of Irish veterinary practices currently source their occupational health and safety information and by critically assessing how seven specifically chosen occupational health hazards are currently managed within Irish veterinary practices. The primary research conducted, including the use of an on-line questionnaire and interviews, enabled the author to satisfy her principal research aim.

The subsequent sections will outline and discuss the study's key findings in relation to the literature reviewed in chapter two and the overall research objectives.

5.2.1 Sources of Health and Safety information/advice (Research Objective Two)

An earlier study by D'Souza et al, (2009) found that only 51% of veterinary practices had previous contacted the Health Service Executive in relation to occupational health and safety. D'Souza et al, (2009) also details how 83% of surveyed veterinary practices

reported using Health Service Executive publications and 30% had previously used the Health Service Executive help-line. In contrast to the D'Souza et al, (2009) research, this study found that 73% of Irish veterinary practices surveyed reported using Health and Safety Authority (HSA) resources to access occupational health and safety information. However, of these only 44% of Irish practices reported utilising Health and Safety Authority publications while a mere 2% reported using the Health and Safety Authority's helpline. In addition, 78% of Irish veterinary practices reported having previously used the Health and Safety Authority's website.

As illustrated in chapter four (Table 4.1) and from the primary research conducted the author has compiled a list of the most common sources of occupational health and safety information (other than the HSA) currently utilised by Irish veterinary practices. The professional body, Veterinary Ireland was most commonly listed as the main external source of occupational health and safety information. In addition, these findings were supported by interviewees one and three whilst also correlating with similar results from D'Souza et al, (2009). Therefore, author concludes that Irish veterinary practices rely heavily on both the Health and Safety Authority's Website and the professional body, Veterinary Ireland, for occupational health and safety information and advice.

5.2.2 Management of seven specific occupational health and safety hazards (Research Objective Three)

The percentage of Irish veterinary practices, as found by this study, who conducted risk assessments for the previously specified seven occupational health and safety risks are recapped below in Table 5.1.

Table 5.1: Percentage of veterinary practices surveyed which had conducted risk assessments

Occupational Hazard	Percentage
Radiation (x-ray)	91%
Waste Anaesthetic Gases	73%
Sharps/ Needlestick Injuries	62.5%
Animal bites, kicks & scratches	62.5%
Chemicals	45%
Zoonoses	64%
Occupational Stress	23%

In sharp contrast to the above findings D'Souza et al, (2009) found that over 90% of all veterinary practices surveyed had conducted risk assessments in relation to zoonoses, sharps, animal bites and scratches and waste anaesthetic gases.

According to the literature reviewed in Chapter Two animal bites, kicks and scratches represent the commonest injuries sustained by veterinary professionals. This fact was also supported by the interviews conducted, with all four of the interviewees reporting suffering an animal related injury during their career. While it is encouraging to find universally recognised control measures being implemented by Irish veterinary practices, the author feels there is still significant room for improvement.

In relation to the use of hazardous chemicals this study found that only 2% of practices surveyed used glutaraldehyde while 68% reported using formaldehyde. These findings correlate with those of D'Souza et al, (2009) who also found that glutaraldehyde was now practically unused by practices in the United Kingdom and van Soest & Fritschi,

(2004) who reported that in excess of 70% of veterinary nurses were exposed to formaldehyde during the course of their work. These findings were also supported by data collected from interviewee two, three and four.

As illustrated in Table 5.1 above, radiation and waste anaesthetic gases are the occupational hazards most commonly assessed within Irish veterinary practices. This supports findings cited in previous literature such as Mosedale, (2009). The author is of the opinion that this is directly linked to the amount education and awareness currently provided in relation to both of these risks. The Code of Practice for Radiation Protection in veterinary practice by the Radiological Protection Institute of Ireland, (2002, p. 13), states that no "*animal shall not be held for radiography except in exceptional circumstances when other means of immobilisation are not practicable*". However, despite this 13% of practices surveyed reported using manual restraint regularly during radiological procedures. Therefore, the author concurs with interviewees two, three and four and concludes that improved awareness of and education on potential occupational hazards is required by Irish veterinary practices. Furthermore, the author maintains that Irish veterinary practices must conduct the appropriate risk assessments and continue to improve control measures implemented in order to reduce the risks posed to veterinary personnel. The author supports the suggestion made by interviewee two to introduce regular, random health and safety related inspections for veterinary practices. The author maintains that this would improve general health and safety standards and compliance among veterinary practices.

Manual Handling was another area which was identified by this study as being largely mismanaged, with 75% of interviewees reporting it as an issue which is largely overlooked in practice. These findings are supported by the literature reviewed in Chapter Two with several author's including, Gabel & Gerberich, (2001), van Soest & Fritschi, (2004), Singleton, (2005), Leggat, Speare, & Smith, (2009a) and Fritschi, Day, & Lucas, (2012) indicating that veterinary professionals are at high risk of developing work-related musculoskeletal problems.

Ringworm was reported as the commonest zoonoses contracted by Irish veterinary professionals at 89%. This correlates with statements made by interviewee one, three and four. This also corresponds with previous research, namely Constable & Harrington, (1982), Langley, Pryor, & O'Brien, (1995) and D'Souza et al, (2009).

The primary research conducted also leads the author to conclude that occupational stress appears to be largely overlooked within Irish veterinary practices. Seventy-seven per cent of practices surveyed had no policy relating to the management of occupational stress. In addition, this study found that the average hours worked per day by Irish veterinarians was 8.9hrs. This is significantly higher than the 7.38 hours/day as reported in Govind, (2012, p. 6). Primary research conducted by the author also found that 79% of veterinary staff reported receiving, on average, only one to two breaks per day. Considering the significant consequences of occupational stress and depression outlined in previous anecdotal evidence the author concurs with the previous literature that this is an area which requires immediate attention.

Overall the author's findings in relation to the management of the seven specified occupational health and safety hazards are line with the common issues outlined in previous research. However, the majority of Irish statistics in relation to the assessment and control of said hazards indicate that management is seriously lacking in comparison with findings reported in a similar study conducted by D'Souza et al, (2009) among veterinary practices in the United Kingdom.

5.2.3 General Principles of Health and Safety Management

The primary research conducted has established that 98% of Irish veterinary practices surveyed reported possessing a written safety statement. However, only 40% of these reported having renewed it within the previous twelve months. These results are directly comparable to those of D'Souza et al, (2009) which found that 90% of veterinary practices had written safety statements whilst 67% of these had reviewed theirs within the previous twelve month period.

The majority of Irish practices (79%) stated a staff member had been allocated as responsible for health and safety, yet 32% of practices reported have no personnel with basic health and safety training. Again these statistics are directly comparable with those of D'Souza et al, (2009) which found that 97% of practices surveyed in the United Kingdom had appointed a person responsible for health and safety, yet only 31% of these practices reported having a member of staff trained in basic health a safety

The primary research conducted found that 89% of practices described having a recording system for accidents. However, both interviewee two and four alluded to major under-reporting of minor accidents within veterinary practice. This coincides with several prevailing studies, D'Souza et al, (2009), Weese & Douglas, (2008) and

Weese & Faires, (2009), which all acknowledge noteworthy under-reporting of work-related accidents, illness and injuries among veterinary personnel.

Primary research conducted by the researcher revealed that 100% of Irish veterinary practices surveyed employed female personnel. The average number of female employees per practice, as reported by this study, was calculated to be six. However, 25% of practices reported that a pregnant worker would not have a risk assessment completed on notification of her condition. Similarly, D'Souza et al, (2009) report that 100% of practices reported employing female staff. However, in stark contrast to the Irish data, a mere 2% reported that a pregnant worker would not have a risk assessment completed on notification of her condition.

In relation to the management of general health and safety the author proposes that Irish veterinary practices have improved dramatically since the introduction of the Veterinary Council of Ireland's practice accreditation scheme. During interviews, interviewee four alluded to a similar conclusion. However, the author concludes that Irish veterinary premises general health and safety management practices are comparatively inferior to those reported by their UK counterparts in D'Souza et al, (2009).

5.3 Research Objectives

Throughout the course of this study the author has endeavoured to fulfil the research objectives. As previously stated the three main research objectives are as follows;

1. To critically appraise current literature available on veterinary occupational health and safety.

2. To investigate where the majority of Irish veterinary practices currently source their occupational health and safety information and advice.
3. To critically assess how specific occupational health hazards (seven in total) are currently managed within Irish veterinary practices.

The subsequent sections outline the three main research objectives and summarise how the author deems she has satisfied them.

5.3.1 Research Objective One:

In the author's opinion research objective one was fulfilled within Chapter Two. Here the author reviewed an array of previous literature based on veterinary occupational health and safety. The researcher then utilised some of the common hazards and issues identified within this research as the basis for her own study.

5.3.2 Research Objective Two:

This objective was taken into consideration during the questionnaire design and data collection stages of the research. A list of sources, as reported by the participants, was then compiled and the results are detailed in Table 4.1 and Figure 4.3. From these findings conclusions on the availability and quality of current resources were drawn. Recommendations for the improvement of same were also made.

5.3.3 Research Objective Three:

The final objective is the foundation of this study as it addresses the overall aim of this study. In the authors opinion evidence of the final objective can be found throughout the data collection process. A comprehensive list of conclusions and recommendations on the overall management of occupational health and safety in Irish veterinary

practices were compiled as a result of the primary data collected in relation to this objective. Please refer to Chapter Six for more information regarding same.

5.4 Conclusion

In the author's opinion the majority of results within this study are generally consistent with previous literature. However, there are, of course a few dissimilarities in the findings of this study compared with those of the prevailing literature. This is to be expected with novel investigations which introduce new perspectives, question previous conclusions and establish new knowledge. In reviewing the international literature available on veterinary health and safety and producing Irish data for comparison the author has provided an insight into the current global standards of veterinary occupational health and safety. The author has also established common trends and issues within the literature thus highlighting areas of veterinary occupational health and safety which require immediate attention. On reflection, the author believes that she has, to the best of her ability, satisfied the main research aim and objectives

Chapter Six: Conclusion

6.1 Introduction

The purpose of this chapter is to present the reader with the conclusions reached by the author throughout the research process. These conclusions are based on all the data reviewed, gathered, analysed and discussed throughout this dissertation. Recommendations, potential areas for future research and the limitations of this study will also be outlined within this chapter. To conclude, the author will include a personal reflection on her experience in completing this research project.

6.2 Research Conclusions

This research project is the first study to provide a benchmark of occupational health and safety management in Irish veterinary practices. The study has provided a substantial collection of diverse and novel data and knowledge on veterinary health and safety from an Irish perspective. From these, the author has drawn the following conclusions.

- Similarly to the conclusions made by D'Souza et al, (2009) the author believes Irish veterinary practices currently rely heavily on both the Health and Safety Authority's Website and the professional body, Veterinary Ireland, for occupational health and safety information and advice.
- Close on one third (32%) of Irish veterinary practices currently employ staff with no formal training in basic health and safety. This deficiency of in-house, competent health and safety personnel may provide clarification for some of the observed lack of management of occupational health hazards among Irish veterinary practices. Therefore the author concludes that improved health and

safety education and information resources are urgently required by Irish veterinary professionals. In the author's personal opinion the distinct lack of specific veterinary practice managers currently employed within Irish practices could also be another contributing factor in the deficient health and safety management practices observed.

- Irish veterinary practices must be encouraged to conduct the appropriate risk assessments and continue to improve control measures implemented in order to reduce the risks posed to veterinary personnel. The author supports the suggestion made by interviewee two to introduce more regular, random health and safety related inspections in order to increase compliance and improve current health and safety practices.
- Within the literature, manual handling is acknowledged as being a significant risk to the veterinary profession. This study has also identified it as an area which is largely overlooked. The author is of the opinion that policies relating to correct manual handling practices must be employed within every veterinary practice in order to reduce the risk of musculoskeletal problems occurring among veterinary professionals.
- The author concludes that occupational stress is a significant health and safety hazard with serious consequences among veterinary professionals which requires immediate attention in order to save lives.

The conclusions discussed above were reached by the author as a result of conducting this research project and take in account the extant literature on the subject area as well as the findings from the primary research carried out by the researcher. The author also sought to relate the above conclusions to the overall research aim and objectives.

6.3 Recommendations

This section discusses the author's key recommendations and also highlights possible areas for further research as identified by the author.

6.3.1 Recommendations on Veterinary Health and Safety

Having examined and researched the subject of veterinary health and safety in some depth, the author proposes the following recommendations.

- The quality and quantity of occupational health and safety information, resources and education available to Irish veterinary professionals must be addressed. The author suggests that a business opportunity exists to establish, one central source, such as a website dedicated to providing up-to-date veterinary occupational health and safety information and proposes that this would be hugely beneficial to the profession. The author also recommends that the professional body, Veterinary Ireland, consider increasing the number of articles on occupational health and safety matters published in its monthly journal. In addition, the author proposes that Veterinary Ireland strongly contemplate devoting a specific section of this professional journal to health and safety, thus helping to increase awareness and improve education.
- Greater attention should be given to increasing the number of veterinary staff competently trained in basic health and safety. The author believes this could be achieved by introducing mandatory veterinary health and safety training for a minimum number of personnel in each practice.
- Scope exists to introduce more regular, random health and safety related inspections to ensure compliance with basic health and safety regulations. These could be conducted by either inspectors from The Health and Safety Authority

or the Veterinary Council of Ireland but preferably the two bodies could liaise in relation to same.

- An increased general awareness of the risks involved with incorrect manual handling is urgently required. Professional bodies must encourage their members to both train staff and introduce policies relating to correct manual handling practices in order to reduce the risk of musculoskeletal problems occurring among veterinary professionals.
- Greater efforts are required to increase awareness on and help reduce the stigma attached to occupational stress, depression and suicide among veterinary professionals. The author suggests that considering the high levels of suicide within this profession that an immediate action-plan should be drawn up to help minimise the risks associated with the aforementioned psychosocial health hazards.
- Further studies need to continue to examine and investigate different areas of veterinary occupational health and safety from an Irish perspective in order to continue to address the serious lack of Irish data on the subject. New Irish data will allow continued evaluation of Irish veterinary practices health and safety policies against their global counterparts thus helping to provide safer veterinary workplaces.

6.3.2 Recommendations for areas of future research

While conducting this study the author identified several areas which have potential as possible areas of future research.

While this research project examines the current sources of occupational health and safety information utilised by Irish veterinary practices and also concentrates on the

management of seven specific occupational health hazards, the author acknowledges that the research conducted was by no means entirely exhaustive. Therefore, the researcher recognises that the topic of managing veterinary health and safety from an Irish perspective warrants more extensive research. The author suggests a more in-depth study covering a variety of additional occupational health hazards and envisages it as a potential area for future research. The researcher firmly believes, due to the immense lack of existing literature there is an overwhelming amount of potential and an even greater need for further, more in-depth research into this subject area. The author is of the opinion that a more extensive study could be conducted in collaboration with The Health and Safety Authority, requiring mandatory responses and thus producing more holistic Irish data.

In addition, the author has identified health and safety in relation to pregnancy as an area which has huge potential to be explored and expanded in more depth in future studies. It is the opinion of the author that with the ever-increasing numbers of female veterinary professionals a study relating to pregnancy and the inherent, associated occupational risks, from an Irish perspective, would be of huge benefit to the profession.

Other topics suggested by the author as possible areas for future research are work/life balance and occupational stress. For example, one could investigate how demanding workloads, occupational stress and fatigue impact on veterinary professionals compliance with basic occupational health and safety. As seen from this study's findings, psychosocial health hazards, such as occupational stress, have been seriously overlooked within the veterinary profession. The author is of the opinion that the

consequences of occupational stress are completely underestimated within the profession. Therefore, she believes a study should be conducted into the possible links between high levels of occupational stress and suicide among veterinary professionals.

Furthermore, the author considers the topic of Suicide within the Veterinary Profession, as an area which urgently requires serious research, especially from an Irish perspective. For example, one could conduct a study among veterinary professionals in order to establish the contributing factors which lead to suicidal thoughts and behaviour. This type of research could provide a valuable foundation for developing an awareness campaign and or prevention action plan for the profession.

The author has also identified the profession of veterinary nursing as a prospective area for future research. Veterinary nursing is still quite a novel career and has only recently been legally recognised as a profession within both Ireland and the United Kingdom. To-date virtually no research has been conducted into this profession and therefore the author is of the opinion that there is enormous potential within this field for future research.

In general, the author believes there is a severe lack of existing research into the subject area of veterinary occupational health and safety. The author suggests that this is a topic which is 'ripe' with potential for future investigations and would strongly support any further research into same.

6.4 Limitations

In spite of methodical planning and preparation every research project has inevitable limitations, the author wishes to acknowledge that this study is no exception. The research limitations, as identified by the author, have been outlined previously in section 3.8 of this dissertation. However, the author would like to reiterate the following;

The author accepts that a larger sample size may have produced more comprehensive results and that in general securing high response rates in research can often be difficult. However, the author is satisfied that the data gathered and the findings reported are representative of Irish veterinary practices.

It is the researcher's belief that the main limitation to affect the scope of this study was undeniably the time constraints. Unfortunately, very extensive research was not feasible considering the time allocation. Therefore, the author had to be practical about the volume and extent of research she would be capable of within the timeframe allotted.

Throughout this study the author was mindful of the aforementioned limitations and has endeavoured to address them to the best of her ability. The author sought to ensure that the quality of this research was not undermined by any limitations and that the final piece of work was of value, and contributed to the knowledge pool.

6.5 Personal Reflection

Personally, I found the process of conducting, compiling and completing this research project a very challenging yet valuable experience. During the course of completing this

research dissertation, I have experienced a variety of mixed emotions. These have ranged from, but were not limited to, anxiety and excitement to stress and even disillusionment at times.

Initially, I was apprehensive about the idea of completing a research project as I had never prepared a dissertation before. I also questioned my level of academic business knowledge and stemming from this, my capabilities. However, after some reflection I soon acknowledged that I had a lot more 'hands-on' experience and business acumen than I first gave myself credit for. I also recognised that with my strong will, some hard work and commitment I could achieve anything I set my mind to.

I personally found choosing an appropriate topic very challenging and definitely spent a lot of valuable time doing so. However, I believe selecting an area which is of genuine interest to the researcher is a vital element in the overall success of any study. After selecting a topic which I had a professional interest in, I was excited to begin researching and became more optimistic about the work required and also my abilities. This encouraged and motivated me. I thoroughly enjoyed this aspect of the research project and found the previous literature I reviewed to be very informative, interesting and quiet beneficial in generating the foundations of my own study.

As previous stated I found the time constraints very limiting, both from the point of view of conducting the in-depth and extensive research that I originally envisaged to finding adequate time to assign to the project. Allocating sufficient time and achieving a balance between existing course work, study, exams and my personal life was particularly difficult during term time. As a result the majority of the available time, to

which I could concentration exclusively on my research project, was during the summer months. Therefore, I had to be realistic about the volume and extent of research which I was capable of within the given timeframe.

Despite having followed all the recommended guidelines in relation to making first contact with the chosen sample and sending reminders, the initial responses were slow to come in. In order to maximise my response rate I decided to make my on-line questionnaire available for a longer time period than originally planned. On reflection, even though this change in the project timeline did improve the overall response rate it also put immense pressure and extra stress on me to complete my write-up in a much shorter period of time. That been said, I believe that the finish product is of no less quality as a result and that the higher response rate provided more comprehensive and generalisable results.

I am a reasonably confident person and have been told on several occasions throughout my career that I have excellent verbal communication skills, organisational skills along with astute attention to detail. However, my need in the area of communication is to be able to refine my academic writing skills. I often find that my attention to detail is harder to communicate in writing and often difficult to keep from being long winded. I acknowledge that clear, concise document writing is an extremely important skill required in any profession. I personally feel my academic writing skills have developed dramatically during the course of compiling this dissertation and that with practice I can continue to improve them further. I also believe that my verbal communication skills have been improved as a result of conducting my semi-structured interviews. As well as improving existing skills (verbal communication, negotiation, time management and

organisation skills) I have also acquired some new ones (academic writing, critical thinking, research and interviewing skills) while compiling this dissertation.

Overall, the process of completing this research project has proved a real learning curve for me personally. I feel, I have not just been challenged, stimulated and developed academically but have also grown quite considerably on a personal level. On reflection, I now not only recognise my weaknesses but more importantly my strengths and my ability to overcome the challenges life often presents. Reviewing the final dissertation now is extremely rewarding and makes the months of hard work and stress all worthwhile.

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APPENDIX ONE

Occupational Health & Safety in Veterinary Practice Questionnaire

Section One: Practice Background Information

Practice Type *(Please choose from one of the following)

- ○ Small Animal
- ○ Large Animal
- ○ Mixed Practice
- ○ Equine
- ○ Other: _____

Where is the practice based? *(Please choose from one of the following)

- ○ City
- ○ Town
- ○ Village
- ○ Rural Area

What classification has the practice received from the Veterinary Council of Ireland (VCI), under the Practice Accreditation Scheme? *(Please choose one of the following)

- ○ Registered Veterinary Practice
- ○ Registered Veterinary Clinic
- ○ Registered Veterinary Hospital
- ○ Practice has not been approved yet
- ○ Other: _____

How many individuals are employed on a full-time basis by the practice? *(Please write the exact number of full-time employees in the practice)

_____

Section Two: Sources of Health and Safety Information and Advice

Has the practice ever utilised any of the following Health and Safety Authority (HSA) resources to source Health and Safety Information? (Please tick all the relevant boxes)

- ☐ The Health and Safety Authority Website
- ☐ Any Health and Safety Authority Publications
- ☐ The Health and Safety Authority Helpline
- ☐ Other: _____

What other external sources/organisations have the practice previously utilised to gain information or advice on Health & Safety? (Please list sources below)

Section Three: Assessment and Control of Occupational Health Hazards

Physical Occupational Health Risks

1. Animal Bites, Kicks and Scratches

Has a risk assessment been performed in relation to the risk of animal bites, kicks and scratches? *(please choose either yes or no)

- ○ Yes
- ○ No

What measures have been taken to reduce the risks of animal bites, kicks and scratches within the practice? *(Please tick all the relevant boxes)

- ☐ Muzzles are used on all animals
- ☐ Sedate animals for stressful procedures
- ☐ Use of protective equipment such as gauntlets/towels/skull hats etc.
- ☐ Staff training on correct animal handling techniques
- ☐ Other:

2. Sharps Injuries

Has a risk assessment been performed in relation to the risk of sharps injuries? *(please choose either yes or no)

- ○ Yes
- ○ No

What measures have been implemented to minimise the risk from 'sharps' in the practice? *(Please tick all the relevant boxes)

- ☐ Implementing a 'sharps' policy which staff adhere to
- ☐ Needles are disposed of directly rather than being re-sheathed
- ☐ Using approved 'sharps' bins
- ☐ Always working with the 'sharps' bin close to where the needle/scalpel is being used
- ☐ Training staff in correct sharps handling practices
- ☐ Other:

3. Ionising Radiation (X-rays)

Does the practice have an X-ray machine? *(please choose either yes or no)

- Yes
- No

If yes, has a radiation Protection Officer been appointed within the practice? (Please choose either yes or no)

- Yes
- No

Has a risk assessment being performed in relation to the risks associated with X-rays? (Please choose either yes or no)

- Yes
- No

Do all veterinary personnel working with X-rays routinely wear dosimeters? (Please choose either yes or no)

- Yes
- No

Is manual restraint used during X-ray of an animal? (Please tick only ONE option)

- Regularly
- Sometimes
- Rarely
- Never

Chemical Occupational Health Hazards

1. Chemicals

Which of the following chemicals does the practice utilise? *(Please tick all the relevant boxes)

- [ ] Glutaraldehyde
- [ ] Formaldehyde
- [ ] Prostaglandins
- [ ] Ethylene Oxide
- [ ] None of the above

Has an individual risk assessment been performed in relation to each of the chemicals ticked above? (Please choose either yes or no)

- Yes
- No

What measures has the practice implemented in order to reduce the risk from each of the chemicals listed above? (Please tick all the relevant boxes)

- ☐ Alternative products or processes have been considered
- ☐ The substance is used in a restricted environment
- ☐ Personal protective equipment is available (gloves, goggles, aprons etc.)
  - ☐ Staff receive training and instruction in safe chemical handling
  - ☐ Products are stored according to safety data sheet recommendations
  - ☐ Other: _____

2. Waste Anaesthetic Gases

Does your practice perform surgery? *(please choose either yes or no)

- ○ Yes
- ○ No

If yes, which of the following anaesthetic gases are used? (Please tick all the relevant boxes)

- ☐ Halothane
- ☐ Isoflurane
- ☐ Nitrous Oxide
- ☐ Other: _____

Has the risk from waste gas to members of staff been assessed? (Please choose either yes or no)

- ○ Yes
- ○ No

What control measures are used by the practice to control the risk in the operating theatre? (Please tick all the relevant boxes)

- ☐ Natural Ventilation of the room (e.g. opening windows)
- ☐ Mechanical Ventilation of the room
- ☐ Regular maintenance of the anaesthetic equipment
- ☐ Regular checking of breathing circuits (e.g. pipes, connectors etc.)
- ☐ Use of endotracheal tubes in preference to masks
- ☐ Use of active gas savaging systems
- ☐ Use of passive gas savaging systems
- ☐ Monitoring of waste gas levels
- ☐ Other: _____

Biological Occupational Health Hazards

1. Zoonoses

Has a risk assessment been performed in relation to Zoonotic Infections? *(please choose from either yes or no)

- ○ Yes
- ○ No

Which of the following measures have the practice implemented in order to minimise the risk of zoonotic infections being acquired by staff? *(please tick all the relevant boxes)

- ☐ Separate animal isolation unit/ward within the practice
- ☐ Restricted access to the Isolation Unit
- ☐ Use of personal protective equipment such as gloves, face masks, goggles, isolation suits etc.
- ☐ Staff training is provided on barrier nursing and zoonoses
- ☐ Appropriate disinfection policies and procedures in place
- ☐ Hand washing policy in place
- ☐ Hazardous Waste disposal policy in place
- ☐ Staff Awareness of risk
- ☐ Other: _____

Has any member of staff contracted a zoonotic illness in the last twelve months? *(please choose only ONE box)

- ○ Yes
- ○ No
- ○ Not Sure
- ○ Other: _____

If yes, how many employees contracted a zoonotic infection in the last twelve months?

_____

Please list the illnesses which occurred? (Please tick all relevant boxes)

- ☐ Ringworm
- ☐ Toxoplasmosis
- ☐ Cryptosporidiosis
- ☐ Leptospirosis
- ☐ Bartonellosis (Cat Scratch)
- ☐ Other: _____

Psychosocial Occupational Health Hazards

1. Occupational Stress

Does the practice have a policy on the management of occupational stress? *(please choose from either yes or no)

- ○ Yes
- ○ No

What measures has the practice implemented to reduce the risk of occupational stress? *(please tick all the relevant boxes)

- ☐ Clearly define roles and responsibilities
- ☐ Design jobs to provide meaning, stimulation, and opportunities for employees to use their skills
- ☐ Provide staff Training in strategies to manage stress
- ☐ Facilitation of the resolution of inter-personal conflicts between staff members
- ☐ Confidential occupational stress reporting facility available within the practice
- ☐ Give staff members opportunities to participate in decisions and actions affecting their jobs.
- ☐ Improve communications—reduce uncertainty about career development and future employment prospects
- ☐ Ensure that the workload is in line with staff members' capabilities and resources
- ☐ Other: [ ]

Average number of hours and days worked per WEEK for both Veterinary Surgeons and Veterinary Nurses within the practice? *Please list both the job title and average number of hours and days worked per week, e.g. Vets 50hrs/7 days and VN's 39hrs/6 days

On average how many breaks does each staff member get per day? *(Please tick only ONE option)

- ○ None
- ○ 1 - 2
- ○ 2 - 3
- ○ 3 +

Section Four: General Principles of Health and Safety Management

Has any member of staff completed any of the following health and safety training? *(Please tick all relevant boxes)

- [ ] No
- [ ] A Certified First Aid Course
- [ ] Fire Safety Course
- [ ] Manual Handling
- [ ] Health and Safety related CPD
- [ ] Other:

Does the practice have a written safety statement? *(please choose from either yes or no)

- ( ) Yes
- ( ) No

If yes, when was it last reviewed? (Please tick the most appropriate box)

- ( ) One year ago
- (•) 1-2 years ago
- ( ) 2 - 5 years ago
- ( ) More than 5 years ago

Have all members of staff seen, read and signed this safety statement? (Please choose either yes or no)

- ( ) Yes
- ( ) No

Has a member of staff been allocated as responsible for health and safety? *(please choose from either yes or no)

- ( ) Yes
- ( ) No

Are staff members involved in risk assessments or solving health and safety problems? *(please choose from either yes or no)

- ( ) Yes
- ( ) No

Does the practice have a reporting/recording system for accidents? *(please choose from either yes or no)

- ( ) Yes
- ( ) No

Is Health and Safety considered before all new working practices are employed? *(please choose from either yes or no)

- ( ) Yes
- ( ) No

How many female employees does the practice employ? *

Would a pregnant worker have a risk assessment completed on notification of her condition? *(please choose from either yes or no)

- Yes
- No

Is employee vaccination recommended? *(please choose from either yes or no)

- Yes
- No

If yes, against what diseases? (Please tick all relevant boxes)

- Hepatitis
- Tetanus
- Other:

Section Five: Optional Feedback

Please feel free to leave any feedback you may have here

Thank You for taking the time to complete this questionnaire, your contribution is much appreciated.

APPENDIX TWO

Dear (*practice contacts name is inserted here*),

My name is Lisa Sheeran and I am currently studying on the Masters of Business Studies in Athlone Institute of Technology, Co Westmeath. I am a University College Dublin qualified Veterinary nurse and I also have an honours degree in Veterinary Practice Management. Before returning to my studies I worked within the Veterinary Industry for nine years.

As part of my masters I must complete a research thesis. I have chosen to conduct research into the management of occupational health and safety hazards within veterinary practice. Previous empirical research has been conducted on various veterinary health and safety issues in Australia, the United States, the United Kingdom and in India but to date no research has been carried out based on Irish veterinary practices.

I have compiled a questionnaire (which can be accessed through the link below) and the main aim of this survey is to examine occupational health and safety hazard awareness and management in Irish veterinary practices. I am writing to you to ask if you would be kind enough to participate in this research, which I envisage will highlight the need for more industry specific health and safety information, advice and support to be made available to Irish veterinary practices. All responses are completely anonymous - there are no identifying questions, codes, numbers etc. in use. All the data collected will be utilised for research purposes only. Should you choose to contribute to this research I would ask you to please read the instructions carefully and answer each question.

I would like to take this opportunity to thank you for your time and I hope you will choose to assist me and our profession by partaking in this novel research project.

Link to Survey:
https://docs.google.com/forms/d/1JGZaQ9huzA7qSAcpJZr1qu19dO4ofWw7PPgXlmnXLy0/viewform?sid=1899868fd9f6135f&token=Rn0PYT4BAAA.JtGxKqUyyEYs_rCBxC7Dug.dpUqIVigVz0HO1-0V9PHWQ

Regards,

Lisa Sheeran

APPENDIX THREE

Interview Transcript No. 1

Pleasantries were exchanged. The interviewer read the information sheet out to the participant and asked if the participant had any questions or queries about the study. The participant had no questions and was happy to proceed with the interview. The interview was commenced.

Interviewer (I): Why do you feel there was a need to establish a health and safety course specifically for veterinary surgeons and veterinary nurses?

Participant (P): Well because a lot of veterinary work is in a large animal environment or on farms, and farms represent 6% of total em work place employment and about 50% of work place accidents. So that makes it hugely high risk first of all, secondly eh I'm 35 years at it and its getting worse every year. It's a bigger problem now than when we started – animals are wilder, there are different breeds, each generation that goes on the animals are being returned to the wild than they were and when we were at college we learned about the anatomy of the domestic animals, we don't deal with domestic animals now, we basically deal with wild animals, would somebody be expected to go out into the Serengeti and start to work on eh animals out there a vet or a vet nurse you know, without problems without anticipating problems? So that's part of it and eh then there are if your an employer there are responsibilities on you and anyway you don't want to be hurt yourself or you don't want anyone else hurt. And there are... - I've seen other people starting to write courses and do things but sure they knew nothing about it, I mean they were just translating we'll say from engineering or something else and knew nothing about veterinary.

I: Generic Health and Safety Courses?

P: Yeah

I: What topics are covered on the Veterinary Specific Health and Safety Course?

P: It covers well we'll say eh it starts off and there's a general introduction to it and the history of it and drivers of health and safety and then we have a look at the legal requirements and the 2005 Veterinary Act and then we go through risk assessment and we go through a whole load of em real life veterinary scenarios – photographs, videos and things like that, that I took from my own experiences across large animal, small animal, and equine practice and meat factories and then we do risk evaluation and then we do the construction of a safety statement and all that sort of thing.

I: Do you believe Irish Veterinary Practices are sufficiently aware of all the occupational health hazards/risks within veterinary practice at the moment?

P: Well I'd say eh... probably not you know they wouldn't be aware of the... most people aren't aware of the legalities and the implications of the legalities for instance if you listened to the news this morning you'd hear that eh Wicklow County Council are being tried about a fire that took place six years ago where two firemen were burnt and you know senior executives in there are going to be answerable for this. So no people wouldn't be aware, people who run into em ... if an incident happens then unfortunately people will learn the hard way.

I: Ok so in your opinion what needs to be done or can be done to make Irish Veterinary Practices more aware of Health and Safety risks?

P: Ah well I suppose sure they need.., well unfortunately they learn from experience that's the first you know, it's part of the role of the Health and Safety Authority to make people aware of these things, they can get information from their own representative organisations and.. but when an incident occurs the stuff will hit the fan and they will learn the hard way and people.... if there are a lot of incidents anyway people might feel they have to or need to sit up and take note about it. There are more veterinary nurses in there now eh in practices, small animal practices and they'll be becoming eh... there'll be young girls there, there'll be x-rays they'll be aware of their own safety and that will generally build up an interest or a em or it'll build up a sort of a head of steam and it will move out from the x-rays to other things. You see people often see the large obvious risks like x-rays but there is much more to it than that.

I: Ok so, in your opinion what then is the single most dangerous occupational health and safety risk/hazard within Irish Veterinary Practice today?

P: Ah well look sure you know there's.... well I suppose the unpredictable nature of animals is a key thing, let it be small animals or large animals sure you know I mean the dog's going to be out of his own environment he could act out of character – so it's the unpredictable nature of random occurrences that's the single biggest factor and on farms its often also the lack of facilities you see most farms wouldn't have a proper place for a cow calving or anything like that. Then you know you have an ageing population I mean it's quiet frequently a vet would land out and there'd be a cow there calving or a heifer no one's ever had a hand on her before and she's not haltered and the vets suppose to solve this problem.

I: Ok, so you're saying in your opinion the main health and safety hazard in veterinary is the unpredictability of animals and on farms it's the unpredictability of animals coupled with the lack of correct facilities?

P: Yes

I: With that in mind do you believe Irish Veterinary Practices currently manage Health and Safety appropriately?

P: Ah well there is always room for improvement with everything. There is always room for improvement but that's the way.. there is always room for improvement.

I: What kind of improvements could be implemented in the management of Health and Safety in Irish Veterinary Practices?

P: What kind of improvements? Well practices need to find out what the risks are within their own practices and have sort of a control plan to deal with those risks.

I: Do you think there are enough support and information resources available to Irish veterinary practices on Health & Safety in Veterinary Practices?

P: Well... resources... well there is lots of information floating around eh experience is the main thing – your own common sense. The handiest way for people (i.e. vets and vet nurses) to find out and to get a crash course in this is to attend the Veterinary Specific Health and Safety Course basically. If they go and attend that then they'll know... it'll point them in the right direction as to what the issues are and how they might reflect upon them.

I: Does this Veterinary Specific Health and Safety course cover the legal aspects of health and safety and the basic legal requirements Irish Veterinary Practices need to adhere to?

P: Yes it covers the legal requirements.

I: You mentioned earlier that you don't believe most Irish Veterinary Practices are fully aware of these legal requirements?

P: They may not be, no I wouldn't think they are fully aware of the legal requirements no.

I: And do you think that the Health and Safety Authority or the Veterinary professional bodies could do more or should do more to educate Irish Veterinary practices on Veterinary specific Health and Safety/Health and Safety risks?

P: Well you see its peoples own responsibility to do these things you know. That is their responsibility to find out about these things.

I: Where, in your opinion, do most Irish Veterinary Practices currently source their information on Veterinary Health and Safety Risks and Managing Veterinary Occupational Health and Safety?

P: Well I suppose from the Health and Safety Authority website, from Veterinary Ireland, from attending Health and Safety Courses or from Peninsula and if they are involved in court cases they'll get a crash course in it

I: If you were able to give one piece of vital health and safety advice to all Irish Veterinary Practices, what piece of advice would you offer?

P: Well look I suppose it would be to get themselves informed of what the issues are and to promote a culture of Health and Safety rather than having all the emphasis on tick boxes and paper work and safety statements you have to promote a culture of Health and safety, this would be the biggest, most important and significant contribution that can be made and that then works its way out and spreads it way onto farms etc and helps promote a safer culture on the farms you see.

I: Do you believe Irish Veterinary Practices play a part in promoting a culture and awareness of health and safety issues within the wider community/wider farming community?

P: I would see it that way; you know eh vets have quite an influential role in the community. There are still a group of people who would be listened to, you know, faith in religious leaders is gone, faith in politicians is gone but eh people do still tend to take the word of a vet, you know, and so they can make a positive contribution to all of these sorts of things.

I: So you believe that if Irish Veterinary Practices began to foster a culture and awareness of Health and Safety within their own practices and then filtered this culture out to their farming clients etc this may help to reduce the number of farming accidents/deaths which occur here in Ireland each year?

P: It would provide a help.

I: Do you think Occupational Health and Safety is adequately addressed on the current Veterinary and Veterinary Nursing training curriculums?

P: Well I would eh... well I couldn't really answer that cause I don't know what they do but I would doubt it. I don't see how they could. I have thought it might be worth colleges while to one day get the Veterinary specific health and safety course brought in and let them em...that would be a way of infiltrating this stuff into people, you know a sort of crash course. I don't know what they do presently but I.. I can't see how it would because I can't.. you know who's giving the current course? Who'd give it? What's their experience? I mean is it book learned or is it practical? Is it theoretical, you know? Is it someone who is lecturing nurses on Health and Safety?

I: In your opinion and in your experience what are the biggest Health and Safety issues faced by Irish Veterinary Practice today?

P: Well you know there are accidents and injuries and things like that are big issues. People being injured by animals. Driving is a big issue, you know especially with young vets. So accidents with animals, injuries caused by animals, driving, you know, all of this sort of stuff. There are loads of things. It is limitless what can go wrong, limitless.

I: But if you were to narrow it down to the top three Health and Safety Issues faced by Irish Veterinary Practices today what would they be?

P: Well I would say attacked by animals in large animal practice, bites and things like that in small animal practice and also chronic things like back injuries and things and issues to do with the back and manual because there is a lot of manual work in veterinary practice too, and also you have the risk of zoonotic disease. We had somebody onto our practice there recently, there were five vets

in the practice and of the five vets in the practice in the previous two years four of them had been off with injuries from animals.

I: Wow, that's a lot.

P: Isn't it?

I: It is a lot, especially when you take into account the time missed and the cost of paying, the time and cost involved in sourcing replacements for and possibly compensating these employees?

P: Yes, it's unbelievable. But sure never mind that, sure you know the pain and annoyance of this you know what I mean I nearly lost the tip of my finger three or four years ago - with an animal caught in a crush, and I was trying to do something right.

I: Oh my god, you nearly lost the tip of your finger?

P: Yeah, well that's what you get, I know another vet who lost his hand – lost four fingers off his hand with a rope.

I: So as you said earlier there is quiet a large risk posed from the unpredictability of animals in certain situations and the lack of proper animal handling facilities/techniques?

P: Yeah

I: In your experience are zoonotic diseases a prevalent threat? Have many vets or vet nurses you have come in contact reported contracting any zoonotic diseases? If yes what zoonotic diseases in your opinion are most commonly reported in Irish Veterinary Practice?

P: Well, at one stage virtually every vet in the country had brucellosis if you went back 25 or 30 years. Eh... and Brucellosis is now eradicated. And em ringworm and things like that would be quite frequent and of course things like MRSA in human medicine eh you know medical workers in the medical field and it would be reasonable to assume that something similar would exist in the veterinary work.

I: Are there any questions I did not ask you during this interview which you felt I should have asked? Or have you any other comments on Veterinary Health and Safety in Ireland?

P: Well, Yeah I would... I think it is only starting off. This thing is going to get bigger and bigger and I mean, you know eh.. because, because people don't understand the legal implications of this 2005 Veterinary Act and of how responsibility is put onto the owners and managers of veterinary practices. So there is huge implications I actually think eh eh this applies to nurses and vets. A veterinary nurse and a vet from every practice will eventually probably have to attend some course similar to the Veterinary specific health and safety course hosted by Veterinary Ireland to get themselves up to date on all this sort of thing and to comply. Veterinary Nurses are key in the whole thing, you generally find in most practices especially small animal practices the veterinary nurse is given this responsibility.

I: Do you think there is a need for or a niche in the current market for a Veterinary specific Health and Safety Consultancy firm within Ireland?

P: Well you see the problem with that is that regulation eh... finishes up putting more costs on business, in effect another layer of parasites eh... you know

parasitizing small business. And...em...so it's difficult to know, I mean em... small business needs to curtail cost not have more cost thrust upon it and with common sense people could decide what the risks are or the highest risks for themselves and have some sort of a control plan for themselves tailored to their own situation. Who's going to come in and do this, I mean is it going to be somebody from the veterinary field, eh or is it going to be someone who has little or no knowledge of veterinary or who's it going to be or I mean is it somebody who spent a year or two at something and calls themselves a consultant? Or is it someone who spent I mean 25 or 30 years in practice? You know, so it's hard to know I would eh... view the necessity of such a thing with a degree of suspicion.

I: Ok with that in mind then do you think the HSA should provide a more veterinary specific on-line health and safety information section relating to the specific occupational risks involved in veterinary, as they do with say farming or for small businesses?

P: Well... they have that?

I: They have a veterinary specific health and safety information section on their website?

P: Oh yea, the BeSMART system covers veterinary practice.

I: Is the BeSMART system not an online risk assessment tool for small businesses in general? I recently read an article on the BeSMART system, I was unaware that it related specifically to veterinary though, the article led me to believe the risk assessments were not yet designed to cover veterinary specific risks?

P: Oh, there is quite a bit of stuff on them, you could find fault with anything. But I mean it would be...I would think that it would be a wiser route for somebody to go eh in a practice to go, go through to BeSMART than to be paying big money eh to someone else to come in and sort of solve the problem for them. They'd learn more about it themselves by going through that system.

I: Ok, do you think that the current BeSMART system could be tailored to include more veterinary specific risks in the future then?

P: Oh yes, yea. Well it is, they have a specific veterinary one there and they cover quite a few things on it.

I: That's great. Thanks. Have you any questions for me or any other comments you want to share?

P: No

I: Thank you for taking the time to participate in this interview, I understand you're very busy and I really appreciate your input and support. If you have any further thoughts or questions feel free to contact me.

P: No problem and if you have any more questions you're more than welcome to contact me again.

I: Thank you very much, that's very kind.

P: No problem, bye.

I: Bye.

APPENDIX FOUR

Interview Transcript No. 2

After greetings were exchanged, the researcher read the information sheet out to the participant and asked if they had any questions or queries about the study. The participant had no questions and was happy to proceed with the recorded interview. The interview commenced.

Interviewer (I): How many years have you worked within the veterinary industry?

Participant (P): I've 21 years' experience working as a Veterinary Nurse. I started my training in 1980 and qualified in 1982.

(I): What type of Veterinary Practice do you currently work in?

(P): It's a mixed practice.

(I): Has the practice been inspected and approved by the Veterinary Council of Ireland, under the Practice Accreditation Scheme?

(P): Yes, it's approved as a Registered Veterinary Hospital.

(I): In your opinion what is the single most dangerous occupational health and safety risk in Irish Veterinary Practice today?

(P): The Vets....the bosses, really they just don't ...em...they don't take into account what's going on. They're running around, they want everything done at 200 miles an hour..em.. and they don't take into account whether you've had your lunch, whether you've washed your hands, whether it's a dog or a cat or whatever is going on its just that it has to happen now. I just find..eh ..mainly the partners but vets under pressure. Like coming in and wanting three dogs knocked out all at the same time because they're running off to do this call or that call or the other call and you know they're not lift dogs properly, em you

know.. they are in such a hurry to do things that they are only half helping you lift animals up onto the table. They're just lethal. They need.... if they just slowed down.

(I): Do you think it's all down to rushing or do you think Irish Vets are sufficiently aware of all the occupational health hazards/risks within veterinary practice?

(P): Yea, I think they are aware of the risks but they just..they've got so much other stuff going on in their heads and so many other things to do they just don't think of them. They're thinking about the call they have to do in 2 hours' time rather than focusing on getting this one patient sorted, get him lifted safety, make sure nothing goes wrong and then we'll focus on the next task at hand. Em.. and mostly I think its men. We've had three or four.. we've had a couple of female locums and they've all been much more organised in their approach and there is likely to be any accidents because they take things in such logical steps.

(I): So do you think female vets are more safety conscious?

(P): Yea, I think so, yea, definitely. Even things like x-raying and stuff, you're never left on you're.. You're generally not left on your own with a huge big dog to x-ray. And the female vet where I work would murder you for staying in the room or attempting to hold an animal during x-ray. When I was training it was acceptable to hold an animal while x-raying. You always had gloves and protective aprons but you did hold patients quiet a lot during x-rays whereas now days it's just a no, no.

(I): Do you think that is because vets and veterinary nurses are more aware of the risks associated with x-rays now?

(P): Oh God yea, yea.

(I): Ok, so what other kinds of occupational health and safety risks have you come across during your time in Veterinary Practice?

(P): em.. well I've been bitten a couple of times eh.. touch wood nothing serious but yea I've had a few bites. I think now days we see more bad mannered dogs and cats and badly handled animals and animals who are just used to getting their own way. .em and that. I don't know I suppose things like sharps and that and again that's human error, carelessness, things been left around counter tops, like we have all the appropriate bins but there are still people not putting the right thing in the right bin.

(I): What about x-rays or chemicals are these risks you have to deal with on a daily basis at work.

(P): X-rays, yes. And we use the ready to use x-ray chemicals so about once a month is about all you're handling the chemicals. But again, I would be careless, like for example up until recently I wouldn't have even worn gloves, which I know I should do. Em...em..yea.

(I): And when you say up until recently, what made you change your practice around handling chemicals and wearing gloves?

(P): I don't know, I think just ending up with stinking chemicals on my hands and my skin being irritated after getting splashed transferring used chemicals into the disposal containers. They've changed some of the containers they're using for em... to transport the chemicals out of the practice and they're harder to pour into and I just found that the older containers were easier to pour straight into

and you rarely got splashed but the newer ones are a nightmare and I just find that I was getting splashed more and my hands were covered in the stuff. And it can't be good for you so not a good idea without gloves. So..I mean a lot of it was me being stupid like, because there were a lot of things we didn't do when I was training. But bearing in mind I qualified in 1982, so health and safety has come on an awful lot. I started my training in 1980. Also the fact that the female vet and the other veterinary nurse who I work with who's only qualified a couple of years they do tend to wear gloves much more often for different... you know for doing that sort of dirty/risky job. And I think I am yea definitely.. and it's just picking it up from watching them do it.

(I): So are you saying you're kind of led by their example?

(P): Yea, yea.

(I): Does the practice you work at use gaseous anaesthetics?

(P): Yes, we use Isoflurane.

(I): Does the practice use any control measures to try and reduce the risk staff being exposed to waste anaesthetics gases while working in the operating theatre?

(P): We use, we have a savaging the, the Aldasorb savaging canisters are connected onto the machines. There are also windows in the room and em it's eh depending on the weather whether they're opened or not. Em.. they'd always be open while we're filling anaesthetic, they'd always, always be open for that and we also fill beside the window to make sure there as little risk as possible.

(I): Ok, in relation to zoonotic diseases then, have you ever contracted any zoonotic illnesses at work?

(P): No, touch wood.

(I): Ok, as far as you are aware has any other member of staff at the practice contracted any zoonotic disease in the last twelve months?

(P): Eh..No, no, I don't think anyone's ever had any that I know of.

(I): In practice, you would do quite a lot of heavy lifting right?

(P): Yea we do a huge amount of lifting.

(I): Is there any health and safety training, guidelines, procedures or protocols in place in relation to this risk?

(P): Awh no we're left to our own devices. Again the female vet would be em.. and the recently qualified veterinary nurse, actually the younger ones in the practice would be telling the rest of us to '*watch your back'* or '*Lift properly'.* But I'd be the one more inclined to say '*Don't lift that dog get the stretcher*' or '*use the table*'. We have tables with wheels em.. ok you still have to lift onto the table but at least if you moving a dog from one room to another, you know, if the table is there and he's 40kgs I don't see why you shouldn't use the table and wheel him. Em..but.. you know..they'd be more careful about how they lift from the floor whereas I'd be more sort of '*get a stretcher, he's huge and you can slide him onto the stretcher and it's easier to lift a stretcher onto the table'.* But nobody ever like sort of said this is the way we do things, this is our practice protocol in fact I was the one who got the stretcher.

(I): Does the practice have any written health and safety protocols or procedures?

(P): Not at all, not at all. There is a safety statement there alright because the inspector wanted to see it. But I mean I'd say it's probably a generic one that was..that all the local vets passed out among themselves. Em, I don't think.., I

actually read bits of it and it's really like ugh, you know, really like it's a joke it doesn't actually relate to what we do, you know?

(I): Ok, to the best of your knowledge has every member of staff being asked to read and sign that safety statement?

(P): I wouldn't think so. I wouldn't say... I'd say most of them wouldn't even know where it is.

(I): Have you ever been required to read and sign the practices safety statement?

(P): No, I haven't no. Not at all.

(I): When was this safety statement updated or revised last?

(P): I think it was just written up the once ah whenever the inspection was, which was at least three years ago now. Or at least if there is a revised version I have not been told about it.

(I): How many female staff are employed at the practice?

(P): Oh god, there is about fourteen of us. Yea it's fourteen of us between part-time and full-time employees.

(I): In your experience, would a pregnant worker have a risk assessment completed on notification of her condition?

(P): I wouldn't imagine so. I'd be very surprised if they did because I don't think they'd even know where to start. One of the female vets currently employed at the practice is pregnant but as far as I'm aware no risk assessment has been carried out. Em.. I know the previous vet who was pregnant.. I think... I don't think they kind of ... like that I think they more or less left her to just say what she could and couldn't do.

(I): Do the practice recommend any employee vaccinations?

(P): No, it's never been suggested.

Even, when I worked in another practice which had quarantine facilities I was never once, in the nine years I was there em.. asked or em...told that I should have a rabies vaccination. Never recommended. Eh a couple of the other girls who worked in quarantine I think they got rabies vaccinated early on in it eh.. you know the first time when it opened up first and the practice sort of said they wouldn't do it again and I got bitten twice in that quarantine. Now they did offer one of the times I got bitten they did offer, you know did I want to go to wherever it was for exotic diseases or that to get tested, now I didn't bother.

(I): Did you require antibiotics following this bite?

(P): No. But, you know I would rarely take an antibiotic I think I've only taken an antibiotic for...maybe twice for bites. In saying that I'm about twenty-one years in practice and I only been bitten em..twice in quarantine... about five times in total – two cats and three dogs. That's not an awful lot really.

(I): Ok, in relation to occupational risks, would you consider work-related stress a risk/issue in veterinary practice?

(P): Yea, definitely. Em I think it depends on your temperament a lot but em.. yea it certainly can be. I mean I do see some of them, a lot of it washes over me I'll come home and vent or give out at work but I won't..I wouldn't let it in on me. But I do see some of them, you know, and it really..I've seen people where it can get in on them. I've seen some of the girls get really upset due to work-related stress.

(I): In your opinion what are the major contributing factors to most work-related stress?

(P): I think it's a combination of the team you work with, the hours you're expected to work, the volume of work, the pressurised environment etc. Like you know if

you're working with a, you know, really good team and everybody is taking the strain then it doesn't matter what sort of hours your working but if you're working with em..a team that's not..that everyone's not pulling their weight that's a real nightmare, you know. Em.. but as I said I think it depends on how you handle it but certainly for young nurses and vets coming out of college into that I could see it being a real problem for some of them.

(I): Do you think the introduction of a module on stress management/coping with work-related stress would be a beneficial addition to current veterinary and veterinary nurse's curriculum?

(P): (Sigh) Em.yea.. one of the things I think coming out of college is I think a lot of them don't have enough experience. I know they do their whatever number of weeks placement but I don't think it's just enough of the real world and I don't think they're getting enough of a feel of what's going on but yea I do feel some sort of stress management definitely should eh..you know, and how to deal with it would certainly help them.

(I): You mentioned earlier of how you had been bitten a few times in the course of your work, and I was just wondering does the practice have a reporting system for any work-related accidents which occur on the premises or during the course of your working day?

(P): Em, we have an accident book but there is no, no official reporting no.

(I): And would the employees and the practice partners record any minor accidents which occur into this accident book?

(P): Probably most wouldn't bother writing it in the book. I think..actually I think there is only one accident written in the book and that's where a student obtained a sharps injury. I think that's... that's actually why we originally

opened the book. I think when that happened we said we better get an accident book and have it. But generally staff wouldn't record minor accidents which they might have. Touch wood though we haven't had many. Em.. most of them would be minor things, you know bumping into stuff and that. We haven't had em.. I don't think we've had a bite in... a couple of minor bites and scratches but nothing more than sort of like you know, wash with hibiscrub and sort it out.. em in a while. I got one but I don't.. did I need antibiotics? I think I needed antibiotics for that one for a couple of days.

(I): Where you off work after that bite?

(P): Not at all. No, no. That's the only bite in the last two or three years before that it was probably five or six years before.

(I): What about the risk of injuries caused by large animal work? In your experience is this common?

(P): Em...there's been a couple of things but again I don't think there has been anything serious. Em, none of them have been off work due to an injury sustained while working with large animals certainly not in the last two years that I know of.

(I): Do you think in practice veterinary employee's handle or manage hazards/risks correctly?

(P): I think we are very lax about them. You can't spend all your time...you know, I think some of the health and safety stuff is, you know just so over the top you wouldn't do anything...but there is a lot of stuff we definitely should be taking a little, you know even just ten seconds just to stop and think before you do

something. That could make a difference. I mean, we haven't had many accidents in our practice but most of them have been through carelessness. Like I got bashed on the head one day, em..with the gate of a crush cage because the cage was up on the top of the block of kennels in the kennel room and I'm the only one tall enough to reach up and grab it. I reached up and grabbed it and as I was pulling it down of course it was like a slope, and somebody had no put the gate back in.. the bottom gate and it came off.. like at speed and hit me straight on the nose. I thought.. I actually thought my eye was gone. Em..that was carelessness on two people's part – it was stupidity on who ever put the cage up without putting the gate back in properly and it was stupid of me not to get a step ladder or a chair to take it down. It was just pure carelessness. I ended up with steri-strips that day and I was actually quiet concussed that day ...because it was a very busy day and like that they were sending me home but I was feeling guilty because they were so busy. But like that I should have gone home, I should have gotten a lift home straight away when it happened and probably gone to the hospital but in saying that I kind of knew it was nothing serious like but I didn't realise how concussed I was until later until it slowed down and I realised '*actually I do kind of feel kind of crappy*'. Again that sort of thing shouldn't be happening. There should be enough staff there to cope because I felt if I had gone I was leaving only two staff to deal with all of the operations, all of the in-patients, the reception desk, the whole lot. And that's why we feel guilty often, we know if we go because we're injured or whatever you're leaving a colleague to deal with twice as much work or stress as they need to deal with. If I was gone home that day that was it no replacement would have been brought in, in my place.

(I): Do you believe Irish Veterinary Practices currently manage Health and Safety appropriately?

(P): I think they could do more, part of it is lack of .. it starts at the top, and many don't have hard and fast rules and they don't insist people follow them. I think they're aware of the risks they just don't have policies and procedures. Ok, you know, we have buckets there and we have all the bins and we label them and we would be very good at using these correctly but when any of the lads come down you can be sure that they'll put sharps in the bottle bin, or possibly even sharps in the clinical waste bin.. they just don't read the labels they just throw whatever it is into whatever bin is nearest – '*That's a yellow bin, it'll d*o'. Now we have big signs on all of them as to what's to go into them.

(I): So you're saying more policies and procedures are required and these must be enforced by the management. A health and safety culture must be fostered – the waterfall effect – from the top management down. Is that it?

(P): Yea exactly. Yes the three partners are bad or worse, they're probably worse than the rest of them. It's little things ... like the lack of thought.

(I): In your opinion, is there enough information and resources available to Vets and Veterinary Nurses on Health & Safety in Veterinary Practices?

(P): Eh.. there probably is but again nobody bothers to look at it.

(I): What could be done to improve health and safety awareness and or management in Irish Veterinary Practice?

(P): I would say ... education would be part of it but I think spot-checks by the health and safety authority. I've never once in all the years I'm in practice have I seen

anyone come in from the health and safety authority and inspect or ask to see where's your sharps, what's your policies, you know interview any of the staff to see '*have you been trained, have you been told what to do and what not to do*?'.

(I): Is there a member of staff allocated as responsible for Health and Safety at work?

(P): Not that I know of, no. I've a funny feeling I might be put down as the main for the purposes of the paperwork but I'm not sure.

(I): Ok, and do you hold any health and safety qualifications or training?

(P): No.

(I): Have you completed a certified first aid course?

(P): No.

(I): Are you aware of the basic legal requirements for health and safety management in Irish Veterinary Practices?

(P): Oh, I'd have a vague idea but I wouldn't be fully aware of them.

(I): In your opinion do the majority of Irish Veterinary Practices foster and promote a health and safety culture?

(P): I don't know.. certainly none of the three or four practices I've worked in. They wouldn't blatantly or knowingly put you in danger but I think they are just a bit oblivious to it.. '*look after yourself kind of thing'*. I think it only really becomes an issue for them when something very serious happens. It's like sure '*we all know it's a dangerous business*' and we do but even little bits and pieces that could be improved. I think they just need a bit of a shake up to remind them that look, you know.... and for the safety of the patients as well sometimes. You

know? I think one of the biggest problems in veterinary practices there's I think a lack of management. Vets are not managers, they do not know how to manage the practice – they are trying to manage the practice as well as do the.. as well as do veterinary work. And I think this is where, I think probably if they had proper veterinary business managers in or veterinary practice managers who, who over saw all of that sort of thing I think it.... I think it would probably be a big improvement.

(I): Do you think Occupational Health and Safety is more adequately addressed on the current Veterinary and Veterinary Nursing Curriculums than it previously was?

(P): Oh yea, the more recently qualified vets and veterinary nurses who I work with would have a better idea and would be quiet well up on a lot of stuff. They would be much more aware of health and safety stuff then I would and again that would be down to their training - definitely down to their training, yea. The older partners are the ones who are less likely to wear gloves or who throw needles into their pockets after use and I find the younger ones are much more aware of putting things, you know, de-sharping a pack, and putting..not leaving syringes on countertops or throwing towels over syringes that sort of thing. Whereas the older lads just.. eh there's no thought goes into it. Stuff just gets left all over the place – '*sure the girls will clean up*' and it doesn't matter that there might be sharps in it. They would never think to tell you that they didn't de-sharp a pack. Again it's just from a lack of thought. I've injured myself a few times that way. Whereas the younger ones would either tell you before you handled it or de-sharp it themselves.

(I): So, if you were to give one piece of advice to Irish Veterinary Practices to help them improve on Health and Safety, what would it be?

(P): God I don't know, maybe stop and think before you do something. Just take ten seconds to think about what you're doing.

(I): Are there any questions I did not ask you during this interview which you felt I should have asked or any do you have any other comments on veterinary health and safety?

(P): No, I don't think so really. God, I think we've covered a lot there. No, I don't think there is anything really, like I said I think they are aware of the risks and they just don't always take the time to work out what's needed and what's not needed. But I think it only takes a few seconds to.. just do a quick risk assessment, you know? We all know the risks, we just need to take that second.

(I): That's brilliant. Thank you so much for agreeing to participate in this research and for taking the time to allow me to interview you. I really appreciate it as I know you're very busy. I really appreciate your input and support.

(P): No problem at all I'm delighted to help.

(I): Thanks a million and if you have any further thoughts on the subject or any questions feel free to contact me. I will forward you on a copy of the transcript as soon as I have it ready.

(P): Perfect and vice versa if you eh..have any more questions for me you're more than welcome to contact me again.

(I): Thanks I really appreciate that.

(P): No problem, bye.

(I): Bye.

APPENDIX FIVE

Interview Transcript No. 3

After greetings were exchanged, the researcher again outlined the details of the research project, reading the information sheet out to the participant and asking if they had any questions or queries about the study. The participant had no questions and was happy to proceed with the recorded interview. The interview commenced thereafter.

Interviewer (I): How many years have you worked within the veterinary industry?

Participant (P): I graduated from Vet College in 2000 and have been working in practice since.

(I): What type of Veterinary Practice do you currently work in?

(P): It's a mixed practice.

(I): Has the practice been inspected and approved by the Veterinary Council of Ireland, under the Practice Accreditation Scheme?

(P): Yes, we were accredited as a Registered Veterinary Clinic

(I): Would you have considered veterinary occupational health and safety much, prior to being contacted about participating in this study?

(P): That's the biggy kind of thing, the thinking about it. Because a lot of it isn't terribly difficult or it doesn't involve a huge amount of change or anything like that and I guess why em we've ..... i've just had a vet nurse em student for the first time and she's gotten a way more focused em.....information from her placement officer of what she needs to be doing for her first year's work experience and everything like that and on various different areas in practice and one of her big ones was em health and safety. Em.. and em that really made ah em, she's just coming to the end of her eight week stint with us so at the

beginning of her eight weeks when she showed me all she had to do, em and what case studies she had to do really made me think a little bit more about it again. Cause I've had vet students and I have some this summer and they've never had anything as directed as that as part of their "seeing practice" bit and you know it's mad that it's vet nurses that are getting the better grounding in and the better education on being aware of the health and safety in practices rather than the vet students who are going to be coming out and being vets in a couple of years because everybody should be getting it so that at least whatever about the vets that are out now who are probably stuck in their ways to a certain extent, that if we had the next crop coming up along if you had those and this is what they were being taught and this is what they were expecting in practice when they went, went into their first and second jobs and things like that, things would improve a lot faster by getting them.

(I): In your opinion are there many occupational risks involved in working in Veterinary practice?

(P): Yea. It's kind of scary when you think about what potentially could go wrong especially in, well in any, even in the small animal situation but I've been in a few tricky situations in large animal practice where I've had to ask people to remove themselves outside the gate or from areas which were unsafe. I felt I was in a safe position but it was bystanders. I have gotten people to clear young kids and older farmers or older members of the family from the yard where I've been working because, not because I was so conscious that I might get sued but you'd really be afraid of what could happen to them, you know that kind of way. And you need a certain amount of confidence to be able to clear somebody out

but you still have to do it and you know that yes if you're the professional person you're entitled to make these calls.

(I): So it's important to be mindful of your own safety, the safety of others and to "cover" yourself legally in case of an accident?

(P): That's the ultimate aim, you know. And it's only going to be when there's a few high profile disasters that em people are going to start thinking about it or something goes pear shaped in your own practice or whatever like that.

(I): In your opinion what is the biggest occupational health and safety risk in Irish Veterinary Practice today?

(P): (Participant sighs) Em... our biggest thing is probably we have six to eight weeks in the spring time where it can be mental and you're running around em over tired, trying to keep all the balls in the air and you end up doing thing the fast way rather than safest way. And you're trying to be loads of different places at the same time and em yea the stress and fatigue, you know, that's the biggest thing it isn't being kicked by a cow, it's putting yourself in more dangerous positions because your over-tired, over-worked and over-stressed during that six to eight weeks of madness in the spring time.

(I): So what you're saying is that, in large animal practice, the psychosocial risks are greater at that time of year than the physical risks are?

(P): Yea and you, you know that's not the way you would do it for the rest of the year or maybe a few weeks before or if you had a proper night's sleep you wouldn't do it but em yea you do things a bit differently em when you've had a bad run of it and things like that there's no two ways about it. That's probably

the bit that, em in fairness most of our clients have reasonable facilities em for handling animals em at the moment and stuff like that so things can be done fairly safely. Em we have a few clients that em are notorious for leaving some animals em too old for either dehorning and or castrating and my boss, who's in the process of retiring, em was too good at not telling them to cop themselves on and do it three or four months earlier. So they're used to waiting till these bulls are anything from eleven to fifteen months old to do these kind of things to them and you know I'll face into a lot of things but a bull that age is fit for being out with a herd of cows like not a candidate for that in my book. Em, but there are one or two that have been let have that mentality so I'm not sure how we're going to solve that in the next year to eighteen months but solve it we will because it won't be happening like.

(I): So how will you address this issue especially the health and safety concerns/risks related to this issue?

(P): Well that's just it, my boss has been facilitating them in this crazy, unsafe behaviour and you have to kind of, to kind of change their mind on what's safe for them and the animals and everything like that. In fairness most of them if you explain to them, they're not that thick, it's not that they are stupid about it, it's more a really bad habit that they've gotten into and everything. Now I also think that, there's no two ways about it large animal practice well the cattle side of it is physical work em which I think when you're a woman you have to kind of work your brain rather than your brawn and ok so like I'll be slow for dehorning and castrating because I'll have them roped up and thrust up so they can't particularly kick or gore or do whatever but nobody gets hurt and the job gets done and everyone is safe, you know that kind of way. Eh so that's, I kind

of try to em make sure that students, for vet students it's mainly been girls that I've had, they know that it's not about the brute force they have its about assessing the situation and making it as safe as it can be for humans and sometimes you have to say, well we can't win today because this animal has gone crazy but we'll come back another day when we're all a bit better and calmer and he's calmed down and we'll win that day and that sometimes walking away while no one gets hurt is an ok thing to do too if that's what you have to do. You feel a bit of a fool when you don't accomplish the job that you went out to do but it's much better to feel like a bit of a fool that to end up in casualty like.

(I): On that note, do you think it's important to promote a health and safety culture among veterinary students seeing practice with you? And from the veterinary students you've had contact with do you think Occupational Health and Safety is adequately addressed on the current Veterinary Curriculums?

(P): Yea, yea. Em, no because they don't get to do enough practical stuff em at all in college. So, you know like, again the couple of students I have at the minute they've been coming to me nearly since school so we've had school and we've had vet college seeing practice and now they're in fourth and final year at this stage so there's been great progression and they're getting animal handling and up and down the crush kind of job and I mean they'd be laughing at me, I'd be having conversations with the farmer or whatever but it's you know hands outside the bars and no don't put your leg, not that they, they don't put their legs inside the crush but some of the farmers would and things like that. So that I'd just be trying to keep it all as safe as we can for everybody. And you know em it's... definitely coming from college ...facilities, they don't have the through put

of animals to deal with numbers that you might see in practice and the facilities if anything are of the better side in college so that they've got the best facilities with the smallest number of cattle which is not what you see in practice. Plus the animals are often so well handled that they just stand which you know that's not, that's not the way it is in real life practice at all. Like we had, I was eh out I had to castrate a few bulls for a client there recently and I had my team of helpers (students). So there was one guy we missed the first day so we went back the next day or two days later and everything was fine but the ones we weren't actually touching at all got a bit jumpy when they saw the guys we were letting out of the crush moving along and two different ones jumped gates. And it would be eh very easy to run in and try to help the situation by I don't know by thinking you could do something but really the only thing you could do and the safest thing to do was to stand back and let them get on with their jumping of the gate and make sure that first of all no humans got hurt and then the less you do with the animal the em more likely they are not to hurt themselves kind of thing. And I had two students with me that day and they weren't doing a whole lot that day just observing and I know they got a huge shock when they saw how an animal that had been very quiet can just jump and clear things and get stuck in other gates and things like that and its only when you see that happening and realise that it happens we have to deal with it and sometimes dealing with it means letting it happen and not getting hurt yourself. Those are the kind of things you don't get in college because no animal would get a chance to do that in college. In a perfect world it shouldn't happen for us either but it does but, and they only way you get use to dealing with the crap that happens is when you see the crap that happens!

(I): In relation to small animal practice what in your opinion is the greatest risk you encounter there?

(P): Em mostly the small yappy dogs that no one has put any manners on. Eh, I've been bitten by a clients little terrier. Eh, now not a bad bite he only got one go at me but he did get a go nevertheless! And we have a few cats that are less than socialable. Em, but those are the things now. For a lot of years it was just me doing the small animals and I would know the regular and repeat offenders who were likely to be the cross one but I would have always have made a point of noting it in any of the records if I had any doubt about any of the dogs or cats coming in. Because we have had a few down through the years which would look very sociable until you did something to them and if you didn't have the muzzle on from the get go you wouldn't get a chance to get it on. And we have a very good eh front of house person, who's been with the place for years and years and if any of the dogs coming in for say the routine neutering or dentals or anything like that if she has any doubts about them at all at all she'll leave their lead on and she'll put them in em in the, the kennel that's em easiest for me to get them out of. We've one walk-in kennel that's very difficult to get a dog that's kennel guarding or any way aggressive out. And if our front of house lady has any doubts about a dog she'll make sure not to put them in that kennel, you know that kind of way and it's the simple little things which stop the problems before they even become problems. And if I have a doubt about an animal I'll tell her and if she has a doubt about it she's sure to tell me and if we panic too much and there's no bother then it's all grand but at least the amber alert never makes it to the red alert this way - and nobody gets hurt.

(I): In relation to the bites that you mentioned you have received, have you ever been hospitalised or out of work or have you had to take antibiotics because of the injuries sustained?

(P): Em, no I've never been off work, I took antibiotics once after a cat bite, em I just felt it was getting a little bit red around it and em he was kind of a 'manky' looking cat so I took a short course of Augumentin.

(I): Have you or any other member of staff had any formal training in Occupational Health and Safety?

(P): Em, I have a first aid course and back when my boss was doing the paperwork for the VCI accreditation and that I was nominated as the health and safety officer so yea I have the odd time, say if someone was getting paper cuts or something stupid like knocking their knuckles I've been the one that's mopped up the blood and written it down in our little book and things like that. Now we haven't had anything too nasty, I had one farmer that was holding a calf and the calf bit him and while the farmer was 'sure it's nothing' and all that I brought him in and cleaned it up and put bandages on him and phoned him the next day to make sure his finger hadn't swollen up. I wasn't really think 'Oh my god this farmer is going to sue me I must bandage his hand so he doesn't', but you'd like to at least, you know, do the right thing and you know if it had of been me and I was on his farm and had gotten bitten then I would at least like the opportunity to wash the blood off and clean it up and make sure there was nothing nasty in it before I went on about my business so you know it costs nothing to be nice to people.

(I): You mentioned there that your practice keeps an accident book, has this always been the case?

(P): Well you see, em my boss, who is retiring now was involved in the veterinary council so when he got the bee in his bonnet about doing things right it was going to done right! He done up the safety statement and things like that and we've had, I don't know what year we got accredited but he had them all sorted before that. And then we've had two new employees start around the same time – well one, one year and the one the following year and he even made the point of making sure that we all got a new copy of the safety statement and that the new guys read it and things like that. So I guess that's been good training for me, you know that kind of way, for having all that sorted because it's all about a habit really isn't it? And once it's there, adding to it is the easy bit but it's having to sit down and think about what has to go in to it and what you do and what you don't do that is the kind of tricky bit.

(I): What could be done and by whom to improve health and safety awareness and or management in Irish veterinary practices?

(P): Em, well like even the fact that when I read through your on-line questionnaire, your information sheet and all of that it makes you think about it. And I suppose we're all just getting our heads around all the CPD we had to do so even as a start of a segment even if an half an hour to an hour session at one of the veterinary conferences was something on health and safety just to try and throw some of the things out there like 'Is there an individual risk assessment done for the sharps and needle-stick injuries and for some of the dangerous drugs?'. You know? I was the first person in the practice who started telling some of the

farmers when they were getting the prostaglandins about the dangers of handling prostaglandins and no-one else had ever even told our front of house lady about these, you know that kind of way? None of it is terrible new but if you don't start thinking about it you're not going to do anything about it. And even just with a small bit of that, it will make people go home and think about you know what are the things which are most urgent for my practice? And what can I do today, this week or next month that maybe in a month's time or six months when it's quiet again I can do a little bit more but to start with baby steps that way. But like we've had sharps disposal contract with the veterinary disposal crowd for as long as I can remember here now I'm presuming every practice does but when w started getting that, that was a biggie for us, you know that kind of way. And it's only when you start doing those things that you say now we've this bit sorted what else do we need to get sorted? And it's when there's more, I know the stuff is out there if you go looking for it but really it made me think about when I was going through your information and the on-line questionnaire, 'Oh God I hadn't thought of that in a while' and even the bit about; Do you recommend vaccinations for your staff? And things like that. Here we are vaccinating the dogs and the cats and I had never even thought about it as something that could come from a work place idea, do you know? Eh, and then I had a baby last year and em when I saw the bit about whether a risk assessment was carried out for pregnant employees or not I thought my poor boss just thought I wasn't going to do any work at the time but there wasn't much more than that done! And I didn't even think there should be, do you know that kind of way. I was very much this is a condition of health not a condition of illness and everything will be fine and all of that. But no I put my

hand up I really hadn't even thought of individual risk assessments because of pregnancy. And now in fairness I got great support at work and nobody pushed me to do anything I wasn't physically or mentally able to be doing and I wasn't expected to look at any drugs that might have been even potentially dangerous or anything at all. Em but I know that maybe not everyone might have got that degree of support.

(I): You mentioned there that you were the first person in the practice to start educating farmers and support staff on the risks of handling prostaglandins, do you think this is largely due to the fact that your female and are more likely to be aware of the risks associated with handlings these drugs/chemicals?

(P): Yes, possibly yea. But like that I have said to, I probably don't say it enough to the farm animal clients but I remember saying it to a new horse owner client that was going to be injecting their pony with some penicillin, about penicillin allergies. And em I don't know how the conversation went that time but I do think it was led by them and by me as well. And I don't think we think about that at all, because actually they had said that the daughter who was twelve or thirteen at that stage, it was her pony, and very well able to as long as she had an adult with her holding the horse, would have been well able to inject and everything in that way, but she was allegoric to penicillin. Now you know, I don't, I had injected the horse already and I was wearing gloves and because she was interested I had given her gloves and everything like that but you know there has to be loads of farmers out there and there has to be some in my practice that are allergic to Penicillin em but nobody talks about that to them.

(I): During the course of this research I have come across incidents of veterinary professionals with animal allergies. Do you, other member of staff or anyone you know have any allergies?

(P): Yes, I've seen that as well, yeah. There was a girl in college with me who was allegeric to cats and in final year she was going through a desensitisation programme. She's not someone that I'm in touch with now so I don't know how that went for her, do you know. My, my boss's youngest son was... is allergic to horses and even if we were on a horse call and came into the clinic and if he happened to be in after school his eyes would start running. That's another one, I did em, I did a .. my cousin is a teacher, and she had asked me to talk to her em leaving cert applied there a couple of years ago and I had actually, I had a very, well I still have him he's a bit bigger now, a very friendly teenage cat at the time and I said I could bring in em a live animal if the school would allow it. But my cousin is allergic to cats so she had to, she was taking antihistamines for two days before and two days afterwards and standing at the far corner of the room which is about the closest thing I've had to deal with, with people with allergies and fully were knowingly exposing them to the cat, do you know that kind of way.

(I): And how about yourself, do you have any allergies?

(P): The only other thing, well it's not animal related but at a time in the spring time I tend to react to the powder in the gloves as an allergy kind of a thing, em so we've move to the kind of gloves I get we just automatically get powder-free because my hands were a bit of a disgrace. But I don't think we've had any other allergies to deal with in the practice.

(I): Do you think there is enough information and resources available to vets, veterinary nurses, veterinary practice managers and Irish veterinary practices in relation to veterinary specific occupational health and safety?

(P): Em well from the external sources I would kind of be thinking of what we get through Veterinary Ireland, maybe the Vet Council and then on the farming side the Department of Agriculture and Teagacs and things like that. And there tends to be something, maybe, every so often like the farm safety was a big one last year we got a few posters of that just because there had been a lot of on-farm deaths but I don't know that vets are terribly much included in what the Department of Agriculture and Teagasc try to inform their own clients and stuff like that. And often I think we'd be a better, well we'd be a help to them because like in fairness most of the farmers will come to some vet wherever they are based and everything like that. And that we could be seen as, to push through the message of farm safety to the farmers as well as improving it from ourselves and our own point of view. Em, I don't know that I've gotten an awful lot about safety in the workplace from Veterinary Ireland a little bit more in the last while but maybe that's just me being a little bit more looking out for it, do you know that kind of way. Em, I don't think we get an awful lot really. Yea, like I know we definitely got em farm safety posters last year cause I remember hanging them up. Em, cause I was looking at where's the spot the farmers look at when they walk in the door, and I remember hanging those one's up but as regards health and safety primarily targeted towards vets, I can't say I've ever had to, that I ever done that. So then that's, cause if anyone is going to be hanging up the posters or saying here we'll hang up this poster in fairness it's going to be me like.

(I): Ok, so what your saying is that, your awareness of veterinary occupational health and safety issues and requirements has primarily been from internal sources and from your boss's involvement with the Veterinary Council of Ireland?

(P): Yea, most of them I guess would have been led by the requirements from the practice accreditation and having to have your safety statements and em your plans in place for all of those kind of things. And it would have either come from say my boss saying this is what we need to do or else him telling me "we need to do something about this, what are we going to do" kind of thing. And then whatever we decided to do got done.

(I): In your opinion are the majority of Irish veterinary practices aware of the basic legal requirements for health and safety or are they just aware of the VCI's practice accreditation scheme requirements?

(P): I'd say they would probably be aware of the VCI requirements and would probably be more reacting to those requirements and whatever inspections they had to deal with em rather than proactively finding out what they were supposed to be doing em on a legal basis.

(I): Again in your opinion, do the majority of Irish veterinary practices foster and promote a Health & Safety culture?

(P): Oh, I think it happens more by, I shouldn't say more by accident by design cause it's suppose NOT to be about accidents but I don't think it's very well promoted.

(I): And do you think it's up to the Irish veterinary practices to improve this themselves or do you think the veterinary professional bodies and the HSA need to come together to help/encourage Irish veterinary practices to foster and promote a Health & Safety culture?

(P): Em....well I suppose if... I don't know that it needs..... you know I'd say whatever requirements that are there from the VCI, I don't know that we need more requirements on that but definitely an increased awareness and maybe em more easy access to some of the information needed to help people realise what could be done and what needs to be done to make their workplaces more, more safe for everybody and how that it's not a load of mumbo jumbo and that it's not all airy fairy, hippy dippy stuff it's actually practical and real and that there is a purpose and a logic to the whole lot. Because you know, I would think that as vets we are pretty, pretty logical and we get things done but sometimes you know if you're not aware that there is another way that might not be the way you're familiar with but isn't a bad way that you can do things and then everybody is safe and everyone's covered and can get on and we don't have to be thinking "oh my god we were flying by the skin of our pants there!" and that we're not getting ourselves into crazy situations.

(I): Ok, so what you're saying is that you think it's down to lack of education or lack of awareness? What if more CPD was provided maybe?

(P): Yeah. Yeah and even like that not to make it completely exclusive of 'this is a health and safety thing' but to have a health and safety day or a health and safety component in all of the CPD's. So like em what have I gone to lately? Like any of the things, you could have health and safety of the you know, abdominal

surgery in the cat or dog, how you deal with the biting dog or how to make sure you don't hurt your back when your lifting the 50kg dog or you know. There was a bull breeding soundness examination thing there in the last few weeks that I wasn't able to get to but you know there could be a, and maybe there was cause I wasn't at that one but you know bull handling is a particular category of itself so there should nearly have been some sort of health and safety element in that but you could bring it into practically every topic because I think if you make it health and safety all off in a corner by itself there is only going to be the few people who are stuck for points and the few people who are probably on top of it already now that will go to it. Whereas, if it's a little element of everything else then everyone gets a bite of, you know all the people who wouldn't necessarily go to health and safety talks they are still going to hear that bit of it and even if they only take home one bit for every talk that they go to that is still one or two bits more than they would of taken in a year.

(I): Yes, as a refresher or awareness builder?

(P): Yeah, a lot of it isn't new learning; it's just that maybe you hadn't thought about it in that kind of a way before. So, yes I know that with the last year I've been more conscious of drugs that can em affect women em of child bearing age and things like that because it was affecting me personally em and I'm sure that there are other guys and women in similar situations that if it affects them they know about it and if it doesn't affect them they kind of forget about it but they em know it at the same time they just need to be reminded of it. And reminded that while it's not essential to them today there are other members either in their workplace or clients they're dealing with that maybe it's more important to them.

(I): If you were asked to give one piece of health and safety advice to Irish Veterinary Practices, what would it be?

(P): Em, well...um..I would say that... I would say that if your clever enough to get into do veterinary and do it then you have to be clever enough to not to take stupid chances.

(I): So, your advice would be to take the necessary time to assess every situation before just jumping in? Is that what you mean?

(P): Yeah, not rushing in thinking "Oh my God I have to do something" but sometimes you need to stand back and see what you have to do and then proceed in a logical and safe kind of way.

(I): In the last twelve months have you or anyone at your practice been bitten during the course of work?

(P): No, we em haven't had any bites. No well I was off, I came back in November and definitely since November to now there has been nothing cause I would have known about that.

(I): Do you think sharp injuries/Needlestick injuries are common in Veterinary Practice?

(P): Em, well, I don't know I have em I got, I got a jab once when I was newly graduated, a needle dropped and I tried to catch it and it scraped me and I guess that was a wake up to me. So it's something I would em be very conscious of and actually a client of mine is actually involved in training medical students as well and one time I was, again not long graduated and I was going re-capping a needle before I dumped it off and she gave me a lecture over not doing that so I

guess those kind of things have stuck with me so I'm.. it's not something I see as a problem but maybe that's because I don't, because I'm more aware of it, do you know that kind of way. Any of the other vets that have been in and out to in practice I haven't had reports of them being jabbed and stuff like that. So hopefully not.

(I): And what about radiation safety does your practice have an x-ray machine?

(P): No, we don't have an x-ray machine.

(I): Ok so you don't have to worry about the risks associated with radiology equipment?

(P): So we don't have to worry about that yeah. Now we did put in, when the practice was renovated and stuff, we had a room prepared with the solid walls and stuff like that, we a view to, if we ever did expand and broaden our horizons a bit that we'd have a safe place in which to do it, but we haven't gotten to that yet.

(I): Ok, so you would be aware of some of the specific health and safety measures required in relation to radiology safety?

(P): Yes

(I): Ok, what about chemicals, would you use any chemicals in the practice? For example Glutaraldehyde, Formaldehyde and Prostaglandins?

(P): We have gas, isoflorane and we have a small amount of formaldehyde in the hysto-pots for sending off specimens but not a huge amount. We get the individual hysto-pots rather than a big bottle of it or anything like that, so it's, so

it's there I suppose you know you obviously have to be careful handling it and all that but it's not something we do an awful lot with. And all of those would be myself or primarily the other assistant in the practice so we'd like to think we'd be aware of that.

(I): Ok and in relation to the Isoflorane, what kind of scavenging system do you use or what other safety measures do you implement in relation to this specific risk?

(P): Yeah we have a passive scavenging system in the em, in the em theatre. It was something I was conscious of again em when I was pregnant, the filling of the machine and stuff like that. While I would have always nearly done that myself em in the evening after surgery or on a day where there was no surgeries going on but I was conscious of having someone else do that when I was pregnant and I kind of make a point even when we have the students around that em that they're not around when I'm doing that more from the point of view of the less people that are around the less people that are exposed and everything like that. Rather than getting into the bit that no-one is going to have any surprises and that.

(I): Ok. And in relation to zoonoses then, have you or has anyone in the practice ever contracted a zoonotic disease/infection?

(P): Em, I haven't em I haven't no I haven't in practice I got ringworm as a student but I haven't in practice. Em part of it is probably that again my boss from when I started off even though he would have been of a much older generation is a very clean and thorough kind of person and long before it was the norm in lots of places he would have been very, very strict about em personal hygiene and wearing of gloves on calls and things like that. So that was my, so because he

told me that's what I had to do, that's what I've done from the very beginning. So I'd rarely becoming directly in contact with anything, do you know that kind of way. And I'm sure that's been a huge part in keeping me eh pretty much disease free.

(I): And in relation to lifting or carrying large and/or heavy items does your practice have a policy/procedures with regard to this?

(P): Em, I'm just kind of trying to think back to whether there is something mentioned in the policy, in our book. Well my policy is anyhow em that I can, I can handle em 25kg of dog eh anything more than that, and some breeds appear heavier than they weigh or whatever, but up to 25kgs I'm pretty good at managing em I might be dead lifting them from the floor to the table but I can take them from the table down. But anything more than that or the more tricky ones we'd always make sure it was a two person or if there was a third person around a three person job. And I have had some dogs em some of the bigger guys, like that are 40kgs and stuff and they've just had their operations on the floor. Em and I've also em called in say to my husband and said "maybe you'd meet me for lunch and just while your here will you help me lift the dog!". We have a trolley for moving from the prep room to the theatre but we don't have an adjustable trolley, we do have an adjustable em surgery table alright and I think I have once or twice just eh manoeuvred the bigger one's nearer to the surgical table so that we could put it down nice and low and not to have to lift them quiet as high.

(I): Great. So in relation to the number of hours worked per week by the vets in your practice, what are we looking at?

(P): It's all up in the air at the minute as my boss who is retiring is out sick at the minute. But for the spring one vet worked 9hours a day, five days a week with two nights on call. I worked, I was on shorter hours for the spring so in the end I was working three days and two nights on call. Two of those days tended to be 10-12 hour days em with the other being just an 8 hour day. And my boss would have done meat factory shifts for three half days so would have been available for three half days is a day and a half, for three and a half days a week to the practice and would have been on call 1-2 nights a week out of that.

(I): So on average 50 hour plus each per week right?

(P): Yeah. That would have probably been at the quieter limits of the spring because definitely at our peak bit, middle of February kind of time there probably would have been maybe two or three 10 hour days and a 12 or 13 hour day mixed in as well, you know a couple of twelve and yeah, yeah. It doesn't bear thinking about really.

(I): Do you think as a result of the long hours etc that occupational stress is an issue/risk for veterinary professionals?

(P): Oh there is and I guess in the last couple of years I've thought probably more about it because a lot of my circle of friends would be vets and so we'd all have a moan to each other in the spring time or whatever but it's only when you're talking to people outside of it and em you say "I wasn't too busy" and you tell them what you did. I was going for some acupuncture at various stages before and after I got pregnant and I think I nearly gave my acupuncturist a weakness by talking about what to me wasn't a particularly bad week and I wasn't, didn't feel I was particularly stressed but she was inclined to say "your body is begging

you for mercy" kind of thing. And em when you're on it it's kind of like the hamster on the wheel – you don't think about it, you just keep going. And it's, it's probably better than it was in that, I know from our point of view we've gone from being one in two to one in three on call. So it's a one in three rota versus a one in two rota and we now share weekend duty in the off season with the practice in the next em town. And all of those are huge improvements like I could moan that I've done nearly ten years of a one in two rota, my boss before he started having assistants a few years before I started working with him, he did over twenty years on a one in one rota. It's all a matter of slowing em changing the mindset and the thing is that I, I don't particularly want to go back to a one in two rota, although we're doing one in two at the moment while my boss is off sick em but I'm hoping by the end of the summer that's going to be resolved and we'll have a third back again. So I don't want to go back to a one in two, I can't imagine being on a one in one eh and I'd imagine that all the new graduates coming out would be more thinking about a one in three minimum eh it slowly is changing and em not before time and I think people are realising that eh there is a little bit more to life than working your mad 80 hours a week or whatever.

(I): Do you think then that occupational stress is a factor which practices need to address or include when writing or revising their safety statements? Or that practices should have a policy on occupational stress?

(P): Yeah. Yeah because I think again with the health and safety we're often too focused, in whatever limited way we focus on it, but we tend to focus on the physical side not the on the em mental or the emotional side of it. And that, that is, you know someone who's feeling on the edge because they're burnt out

because they've been working crazy hours and they only go home to sleep and eat em is very much as stressed and sick as a person who has just been bitten by the doctor's cat like.

(I): Yes. Again during the course of this research I have become aware of the high incidents of suicide among veterinary professionals.

(P): Yeah. Yeah, like I always knew it was high. Yeah, it's scary but look it's all about having the em the assets and the knowledge and then if you get to the place where you feel like you're in that big black hole, em and I guess it's something I thought about more about when we've had new graduates because I'm out 13 years now but I still remember, I'd say it was probably em eighteen months when I was in practice before I started sleeping properly the night's I was on call. And that was, I wouldn't have thought I was particularly stressed but when you look back on it, you know that kind of way. That first spring I was completely living on my nerves like and especially like your first couple of springs out in mixed practice it is completely, completely flying by the seat of your pants kind of stuff and, and nerves and getting to know the place where you are working and the people and the clients and everything like that and I thought a lot about the level of support new grads need and I suppose they would make you think about the level of support that em we all need even now and I know I'm looking at that, I felt that while I was very stressed the first spring I was out but I knew I could always have rang my boss for any immediate professional support I needed on the spot and I had a great circle of friends that I could always ring and say "Oh my God you'll not believe what just happened" and "how am I going to fix this?" or whatever. And we still do that, there are a group of us that mightn't get to physically be in the same places very often but

you always know its springtime cause whenever we're out on the roads the phones are going mental. But you need, you need to have something and like that at eight o'clock at night if you're on call the chances are that someone else is em going to be on call as well and you can ring them whereas if you have friends outside the veterinary circle first of all the whole concept of being on call and not spontaneously being able to go to the cinema or whatever like that is a bit of a foreign concept for them to get their head around. But even the idea that you might still be working at ten o'clock on a night in March em when their finished school at three o'clock like!

(I): So, you're saying the anti-social hours can often put pressures on various personal relationships?

(P): Oh yeah. Well this is just it. Well, sure it's a complete occupational hazard, I'm married to a farmer em so you know there are times in the spring time where he either, well before we had the baby, but where he'd come on call with me because if he didn't em he wouldn't see me! And in the summer time, because he does contract, I would sit in the tractor with him because if I didn't I would see him like. And you'd be thinking, you know, if he was a teacher or an accountant or you know but then you'd wonder he'd be more available time wise but then I'd have to make myself more available too and I don't know if I'd be able to do that. Yeah, and just even thinking about my group of friends then, the vet friends tend to either be married to either vets or farmers em vet nurses or em cops – everybody with anti-social hours like!! But it is tough like, I mean like any of the non-veterinary friends I have, it's a bit difficult to get around the concept of really from around February to May I don't do a whole lot other than work, eat and sleep and the essential kind of things that need to get

done. And it's one of the good things about mixed practice I suppose that the summer months are a lot quieter and you can em skive off for half a day or whatever like that and you can have a bit more freedom but in the spring time you're very, very em tied down.

(I): And do you find it harder since you've had the baby?

(P): It's... I would have thought I was busy and got a lot done before, it's, it brings it to a whole new level. Like, yeah, for the spring time, I work it so that I work three days a week and two nights and I worked it so that my nights were two consecutive nights and my mum used to come over and stay in the house because we have 50 cows here at home in the spring time, so there were nights where neither myself nor my husband were in the house with the baby. Now there was only one, only one day where I eh didn't get to see her in the morning before she woke up and I didn't get to see her that night before she went to bed. But you know, one day you can handle but other than that I got to see her either in the morning or before she went to sleep. Oh I, like I say I put in 10 hour days in November when it was quiet so that I would only have to do three days. So you think your busy beforehand, but you get home and she doesn't really care if you were up at three in the morning doing a calving if she wants to be up at six that morning then that's when she wants to be up like. And like it's great but you, other than that, I was terrible lucky that mum was willing and able to come over and stay at least two if not three nights a week for the eight weeks of the spring time em but realistically if she wasn't able to do that I don't think that I would have been able to continue working in, in what I was doing. I could find something else perhaps to do, but to be able to do on-call and nights and stuff like that you need to have somebody around. Oh yeah, it is a

worry and is stressful cause like yesterday when I thought I'd get a chance to talk to you I had been looking at a horse with colic which took a turn for the worse and while I was on my way to that my husband called to say that the baby had pucked like so where do you want to be? I mean it was awful and I wanted to be treating the horse which was colicking and the clients are lovely but you know your baby is sick at home em but em it's not easy. And I think, I think, see we qualified in 2000, we were the last 50:50, male: female year I think in UCD. Em, it's been up to 75-80% women from then on, so it's going to be in the next ten years when hopefully a lot more of the women of, from me on are moving into more senior positions in practice and it's a whole different ball game when you have a family like. I mean I love what I do, I get a great buzz out of it but I worked long and hard to get the baby and if it came down to it in the morning she'd have to be number one. But I think if more women are in the position I'm in then it's going to have to become well it's not a traditional Monday to Friday kind of thing, someone will work weekends, someone will work three days and no nights and someone will work nights because maybe it suits them, you know? There is going to be some big change, well there won't be big changes there'll be necessary changes but they'll be big to the likes of my boss and to his comrades who would have thought that you know women will get over this or they won't be vets anymore.

(I): Do you think this professional shift will also impact on health and safety? Because female veterinary professionals of child bearing age are at higher risk than their male counterparts in relation to several occupational hazards?

(P): Yeah. Oh there is, from the drugs point of view and from em even from the point of view of having a body that is healthy enough for a pregnancy em to the

working level to not having your body over stressed and being able to juggle it all and then again must of the guys handle it cause they've got that extra bit of brute strength and everything like that but that's not going to be enough you're going to have to mind yourself mentally and physically and everything like that. And not even shorter working hours but smarter working hours, maybe having a couple of long days and then being off to do the things you want to do and things like that. Whereas now there is still kind of a 'hero complex' about the whole thing, of having to clock in the long hours and having to things maybe the hard way or the crazy way and stuff like that and that's going to have to change. And I think having more women around the place is maybe going to bring a bit more logic to, some of it is from because you don't want it to be the woman who's saying I don't want to do it this way in case your seen as just the 'stupid' female who can't do it but we have to move away from that because there are too many women around to be making those kind of, saying those kind of things any more.

(I): Do you think most Irish Veterinary Practices currently manage Health and Safety appropriately?

(P): Well I think we could all do with taking a look cause definitely as I was saying when the vet nurse student I had came with a list of 14 case studies she had to complete on her eight week placement, I think 3 of those directly dealt with health and safety. So when I read those em it made me think more about those three topics, one of them I know was assessing risks around the practice and so we talked about manual handling, sharps and I know there was another one and then we were able to elaborate on one as it said to elaborate on one so we could elaborate on the sharps policy and all that but you know it makes you think

about all of those things. So sometimes, yes I was aware of all of those risks in the practice before I read the student vet nurses case studies even having that as a reminder makes you think about it. So that you can, I might have been managing it all but it was nearly by default that I was managing it. Now that I read the thing with her I'm thinking about, I've thought about it a bit more in the last six weeks, do you know that kind of way? There was nothing particularly that we were doing wrong or particularly badly but we were only, I was only doing it because that's what I had done and maybe I was conscious of some of them anyhow but still when you are reminded of it, it makes you think about it and then when you think of those ones you begin wondering is there anything else I need to think about. Do you know that kind of way?

(I): Would you say, in your opinion from the dealings you have had with students then that the current veterinary nursing students are more aware of Occupational health and safety issues than the veterinary students?

(P): Well in comparison, just comparing the first year veterinary nursing student I have, and I have a vet student going into fourth year and one going into final year and they have never had anything like that to complete. And while we might have talked about it at various stages some of the things that came up during cases telling them this is where things have to go and this is why we do it and stuff like that there'd be, I'd have to say yes I thought em the veterinary nursing student was coming armed with more knowledge and more questions as how to get more knowledge than they ever were.

(I): So, do you think Occupational Health and Safety is a topic which needs to be addressed more adequately on the current Veterinary Curriculum?

(P): Yes, even from the em, just comparing the em, what she has to do the case studies, now I know the vet students do have to make a list of kind of what they did and mark off some, when competencies are achieved and various tasks and stuff like that. I haven't come across anything on health and safety on that so if, and then I have even had anything as detailed as complete the case studies on the different em topics. The veterinary nursing student had to complete, there was the bit on health and safety and a bit on em receptionist and front of house duties, there was kennel management and cleaning down the back and stuff like that and then its review cases where you prepared accommodation for a patient and assess the needs and things like that. Ok on some levels it is probably the vet nurse that would do this but I think the vet students would benefit if they had something similar to that. Now they probably wouldn't thank me for making more paperwork for them but it does, it does make you think and it's only when you go through those kind of scenario's and they become real to you and so anything that involves a case study and if it's something you were involved with to any extent it's much easier to put all the theory together and know it and understand why, but the vet students aren't getting that and they are definitely not getting it as far as I can see on the health and safety side of it.

(I): Are there any questions in relation to health and safety that I did not ask you during this interview or which you felt I should have asked? Or do you have any other comments on Veterinary Occupational Health and Safety?

(P): Em, no I don't think so I think we've kind of cover almost everything that I was thinking of from when I had read through your participant information em sheet and your questionnaire. Em I can't really think of anything now at the minute.

(I): Well, thank you very much. I really appreciate you taking the time to speak with me. I really appreciate it as I realise how busy you are. I really appreciate your input and support.

(P): No problem. Thanks very much. I hope I've been of some help and good luck with the next few weeks at your thesis and everything like that and we'll talk to you again soon.

(I): Thanks a million and if you have any further thoughts on the subject or any questions feel free to contact me and I'll forward you on a copy of the interview transcript as soon as I have it ready.

(P): Ok, that's not a bother at all.

(I): Thanks a million.

(P): That's lovely, thanks, talk to you soon.

(I): Ok, bye.

(P): Bye.

APPENDIX SIX

Interview Transcript No. 4

After greetings were exchanged, the researcher read the information sheet out to the participant and asked if they had any questions or queries about the study. The participant had no questions and was happy to proceed with the recorded interview. The interview commenced.

Interviewer (I): So just to start off, how many years have you been working in veterinary practice?

Participant (P): Five years

(I): What type of Veterinary Practice do you currently work in?

(P): It's a small animal practice, with 100% small animal.

(I): Has the practice been inspected and approved by the Veterinary Council of Ireland, under the Practice Accreditation Scheme?

(P): It has yes. It's a hospital, a Registered Veterinary Hospital.

(I): Have you or any other member of staff have any formal health and safety training?

(P): Em, no not that I'm aware of… Not anything separate, obviously the vets and the nurses in college would have covered it but no not otherwise, I think.

(I): Ok, so no member of staff has a first aid course or a manual handling course done?

(P): I did an occupational first aid course while in college. Otherwise I am not aware if other staff have done them.

(I): Drawing from your experience of working in practice, what in your opinion what is the single most dangerous occupational health and safety risk in Irish Veterinary Practice today?

(P): Well, with my back (I have a prolapsed disc in my back at the moment), I suppose it's the actual manual handling side of things. From my perspective it's very important to do it properly, as I know a lot of people with back problems and I think that's something that's really, really important to look at because you know you'd always be lifting, lifting things and moving around and …. Therefore I think it is the most dangerous health and safety risk.

(I): Ok, what kind of things do you think veterinary practices could do to reduce this risk so?

(P): Well maybe a…, I was thinking maybe a manual handling course would be beneficial. I was actually thinking of requesting it at work. That it would be eh helpful to prevent any, you know, future accidents or injuries related to staff's backs.

(I): Ok, so if you don't mind me asking did you injury you back at work?

(P): No it wasn't at work, I was horse riding. But I also have degenerative changes in the disc and they are related to wear and tear at work.

(I): Do you have any equipment to help you with lifting and carrying at work?

(P): We do, all our tables are adjustable, therefore we can lower them for lifting animals but I suppose we don't use trolleys so we do carry the animals … a lot.

(I): Have you ever be bitten, kicked or scratched by an animal at work?

(P): Em yeah I have, yes. I've been both bitten and scratched, luckily not kicked.

(I): Was this recently, as in within the last 12 months or prior to that?

(P): Em, yeah it would have been in the last twelve months yes.

(I): Did you report the incident to a senior member of staff at the time?

(P): I did yes.

(I): Ok. Was the accident recorded?

(P): Yeah, it was. It was actually while I did some locum work in another hospital so it happened there and was recorded there.

(I): Did you have to seek medical advice or did you take antibiotics following the scratch?

(P): No, no I didn't, it healed up ok on its own after a while. It was a cat bite abscess I got on my hand.

(I): Did you need to take any time off work following this accident?

(P): No, no I didn't

(I): Ok so, In relation to sharps or needlestick injuries have you ever sustained either in the last 12 months?

(P): Eh, Yeah. Yes I have but I didn't report it no.

(I): Did you have to take antibiotics or take any time off work for it?

(P): No, no it was just a needle prick that I got in my finger so it was not necessary. It was a clean needle and it was fine.

(I): Ok and how did you look after the injury?

(P): Yeah, I just cleaned it and made sure it was kept clean.

(I): Do you use x-rays at work?

(P): We do yes.

(I): Do you use a dosimeter, I mean are you supplied with a dosimeter at work?

(P): We do yes.

(I): Do you share one dosimeter or does each member of staff involved in x-rays have their own individual dosimeter?

(P): Each member of staff have their own dosimeter, but not everyone are wearing theirs at all times.

(I): How often do you send them off to be read?

(P): It's bi-monthly or like every two months.

(I): Would you ever be asked to hold or restrain an animal during x-ray?

(P): No, no I've never been asked to do that and I probably wouldn't even if I was. I wouldn't do it.

(I): Ok, can I ask you why not?

(P): Em just for the risks associated with radiation, I wouldn't eh.. we would usually either use sandbags or sedate animals em.. depending on the case obviously.

(I): Ok so, as a female veterinary employee would you consider yourself aware of the risks of radiation?

(P): Yeah I would yes.

(I): Do you use or are you exposed to any chemicals during the course of your work?

(P): Em, no not that much because we have a digital x-ray processor and everything so em, not really. The only thing that I really..could be in contact with is Formaldehyde, just for preserving tissue samples and such.

(I): And what precautions, if any, do you take when handling Formaldehyde?

(P): Em, well I use gloves usually, but I suppose really that's the only thing I could be in contact with. But there hasn't been any incidents with that.

(I): Do you use or come in contact with either Prostaglandins or Gluteraldehyde?

(P): No, No.

(I): Are you allergic to any animals or are you aware of any other allergies you may have?

(P): Luckily I'm not allergic to any animals, but I do get allergic symptoms from pollen.

(I): Do you know if any of your work-colleagues are allergic to animals?

(P): No, No.

(I): Does your work place have a written health and safety statement?

(P): Yeah, we do yes.

(I): Have you ever been asked to read and or sign the practice health and safety policy?

(P): Em, I was, I didn't have to sign it but I had to read it at the start of my work placement (it was part of the course curriculum).

(I): Do you remember what policies are covered within the safety statement?

(P): Each room at the premises are covered in the statement, identifying their possible safety hazards and protocols to prevent them.

(I): Ok, do you remember if the safety statement includes policies on radiation, chemicals and things like such?

(P): Yeah, it does yes.

(I): Does the practice you work at use gaseous anaesthetics?

(P): We do yes, Isoflurane.

(I): Are you aware of any of the potential risks associated with using gaseous anaesthetics?

(P): Yeah, Yeah, I am yes.

(I): Ok, and would your awareness of those risks originate from work or from college?

(P): Em, a bit of both. We would have obviously talked about it in college but then I know it from practice as well really, we've talked about it.

(I): Does the practice use any control measures to try and reduce the risk staff being exposed to waste anaesthetics gases while working in the operating theatre?

(P): Em, well obviously we make sure we have a working savanging system, and that the anaesthetic machine is checked for leaks and all the E.T. Tubes have their cuffs blown up properly and just try to avoid any anaesthetic gases leaking out into the theatre.

(I): What protocol do you use for filling the anaesthetic machine with Isoflurane?

(P): Unfortunately we don't have a key-and-lock system to fill the vaporizer at work. I use a face mask while doing it. I usually try to do it at the end of the day, sometimes it happens and you have to kind of top it up during the day, sometimes in the morning or so but yeah usually we try to do it in the evenings when there is no other people around or…that.

(I): What kind of a scavenging system do you use?

(P): It is a passive scavenging system with an aldosorber.

(I): Ok, in relation to zoonotic diseases then, have you ever contracted any zoonotic illnesses at work?

(P): Eh, I had, you know, Ringworm – Dermatophytosis.

(I): When had you Ringworm and how did you contract it?

(P): It was last year. I think, about half the staff got it. Well there was about three or four of us yeah. It was a little kitten we had for rehoming, it was found – as a stray little kitten and we were all handling her a lot until we realised she had ringworm, so she gave us a little present!!

(I): Is that the only zoonosis you've had?

(P): Yeah.

(I): Ok, as far as you are aware has any other member of staff at the practice contracted any zoonotic disease in the last twelve months?

(P): No I don't think they have no. Other than the ringworm.

(I): Ok, in relation to occupational risks, would you consider occupational stress a risk/issue in veterinary practice?

(P): I think it can be, yes. I think yeah when it's busy and … so I suppose yeah it could be, definitely. If you're working under pressure.

(I): Do you think there is anything practices can do to help minimise occupational stress levels among their staff?

(P): Well, I suppose have enough staff first of all. I suppose if somebody has a problem or they're stressed that they can talk about it.

(I): Are you aware of the suicide rates in Veterinary Profession in Ireland?

(P): Yes, they're fairly high I suppose.

(I): Ok and do you personally know any veterinary colleagues who have committed suicide?

(P): No, I don't know.

(I): Is there a member of staff allocated as responsible for health and safety at your place of work?

(P): Em, kind of, we haven't discussed it as such but it would be the practice owner, the head vet.

(I): Ok, do you have regular staff meetings at work?

(P): No we don't, it would be great if we did but we don't at present.

(I): Are the staff gotten involved in risk assessments and solving any health and safety issues that arise?

(P): Yes, I think we're involved as well, for example if there are any new protocols that we would adopt we would share our ideas or discuss about them.

(I): Does the practice have a reporting/recording system for accidents?

(P): We do have, yeah. It's barely used, I suppose we don't use it as much as we should, like not all incidents would be reported necessarily, you know like, scratches and bites and things that would happen often enough.

(I): Just to clarify, are you saying staff are inclined to under report incidents and accidents?

(P): Yes.

(I): Why do you think veterinary staff tend to under report accidents and incidents?

(P): I suppose you get so used to them and probably being busy and everything you don't have the time to take to go and write something that is going to be a little scratch or.. and you get so used to it that, you know, you wouldn't regard it as anything big. And I think people in veterinary are fairly, you know they can cope with a lot so it wouldn't be something they'd be worried about as such.

(I): Do you think certain staff are more at risk/ more susceptible to occupational hazards than others?

(P): Em, well I suppose just with the female staff em you know if someone is pregnant or are thinking about getting pregnant, we are a bit more susceptible you know.

(I): How many female staff work at the practice in which you are currently employed?

(P): There are seven of us.

(I): And how many male staff?

(P): There has only been one for the past five years but we are getting a new male member of staff soon – so there'll be two.

(I): Would a pregnant worker have a risk assessment carried out on notification of her condition?

(P): Yeah, Yeah. I suppose it would be informal but would usually be between the pregnant employee and the main vet. The employer would go through things that need to be taken into consideration.

(I): Do the practice recommend any employee vaccinations?

(P): No, no we were thinking about, when I had the cat bite abscess that maybe I should have gone to get my tetanus updated but I decided against it as I had it just over five years ago, so I didn't take it.

(I): Do you think Irish vets and vet nurses are sufficiently aware of occupational health risks?

(P): I think usually they are fairly aware but I suppose it would be no harm to get additional training on it because it is a very important subject. But in general I think yes, em I know I work in kind of a … you know in the city practice but I don't know it might be different in a eh in different places but usually I think em, whoever I've worked with have been anyway.

(I): Do you believe Irish Veterinary Practices currently manage Health and Safety appropriately?

(P): Em, I think it probably varies a lot em which place you go to – I would say some places would be more relaxed and some other places would be more eh conscious. But I think some aspects are well managed such as like, you know disease control, zoonoses, like x-rays, radiation and such. I think they are pretty well managed.

(I): And why do you think these certain aspects are managed more appropriately than some others?

(P): Definitely the VCI accreditation has helped because you know they have to have adequate protocols in place with hazardous scatter in x-rays, for example.

(I): In your opinion, what could be done to improve health and safety awareness and or management in Irish Veterinary Practice?

(P): Em I was thinking that maybe the veterinary council could add a specific web page dedicated to health and safety questions or normal issues that people would have on health and safety. So it would just be easy access to information on veterinary health and safety issues. I think that would be beneficial.

(I): Do you think more health and safety training for veterinary professionals should be encouraged?

(P): Yeah, I don't think that would do any harm – the more education the better.

(I) Is there enough information and resources available to VN's on Health & Safety in Veterinary Practices?

(P): No, I think it would be beneficial to get something more. I think it would be beneficial to have something you can always go back to and have a look like a resource such as the VCI health and safety webpage I mentioned before.

(I): In your opinion what could practices do to help minimise occupational health risks?

(P): Definitely think everyone should have to do a manual handling course because it's obviously close to my heart at the moment with my own back injury!

(I): Are you aware of the basic legal requirements for health and safety management in Irish Veterinary Practices?

(P): Em, I'm aware of some of it any way probably not all of it. Things in relation to health and safety, prescribing medications and such I would know but I suppose there are areas which would be good to have more information on.

(I): And the legal information and knowledge that you currently have, where would that have originated from?

(P): Em, from college, yes.

(I): Do you think Occupational Health and Safety is adequately addressed on the current Veterinary and Veterinary Nursing Curriculums?

(P): Em, I think it's definitely being taught well in colleges, but I think it would be beneficial to add more. Well I suppose the way you have broken the topic down for your research - your went through physical, biological, chemical and psychosocial hazards so if they did something like that and just went into each

in-depth and had a subject itself, like for one semester to go through everything health and safety so at least there wouldn't be any ambiguity or people would know exactly what the risks are and what to do and what to avoid and I think that would be good.

(I): In your opinion do the majority of Irish veterinary practices foster and promote a Health & Safety culture?

(P): Em, yeah. I suppose I've only worked in two small animal hospitals and in general I think they both promoted a good Health & Safety culture but em yeah I've only worked in two small animal hospitals so that's as far as I know.

(I): Are there any questions I did not ask you during this interview which you felt I should have asked or any do you have any other comments on veterinary health and safety?

(P): Em, no my only advice to staff working in veterinary practice would be to take care of your back – do a manual handling course! Prevention is better than cure! But no other than that I think you covered everything in the interview, you asked all the questions.

(I): So your one piece of advice to vets and vet nurses is to take care of your back and be aware of correct/safe manual handling procedures.

(P): Yeah, I'm a spinal health advocate!!

(I): That's brilliant. Thank you so much for agreeing to participate in this interview and for taking the time to talk to me. I really appreciate it.

(P): No problem, you're welcome.

(I): Thanks a million and if you have any questions or further input on the subject feel free to contact me. I will forward you on a copy of the transcript as soon as I have it ready for you to check you're happy with it.

(P): Great.

(I): Thanks again, I really appreciate that.

(P): No problem, bye.

(I): Bye.

APPENDIX SEVEN

Participant Information Sheet

Name of Researcher: Lisa Sheeran

Title of Study: A Study of Occupational Health and Safety Management in Irish Veterinary Practices

Aim of Study: The main aim of this study is to address the lack of Irish data on the management of occupational health and safety in veterinary practices by examining where the majority of Irish veterinary practices currently source their occupational health and safety information/advice and by critically assessing how seven specifically chosen occupational health hazards are currently managed within Irish veterinary practices.

Research Rationale:

The author worked within the Veterinary industry for approximately nine years before returning to her studies and has a keen interest in all aspects of Veterinary Business. After become aware that previous empirical research has been conducted on various Veterinary Health and Safety issues in Australia, the United States, the United Kingdom and in India but that to date no research has been carried out based on Irish Veterinary Practices the author felt there was a gap in the research.

Traditionally the Irish Veterinary business landscape consisted of small, one-vet practices which were often run from the Veterinary Surgeon's house but in recent years the Irish and United Kingdom Veterinary industry has witnessed significant growth. This growth has seen the replacement of small village Veterinary practices with large Veterinary clinics/hospitals and the introduction of large corporate Veterinary businesses in many areas. As a result of this altering business landscape, the recession

and recent changes in both professional regulation and the advertising code the Veterinary industry has become more competitive. All Veterinary Practices must therefore be able to manage occupational health and safety in order to maintain high standards, prevent work-place accidents, reduce costs and remain legally compliant.

As cited in Baxter (2013) recent research conducted out on behalf of the Health and Safety Authority (HSA) revealed that during the 12 month period to November 2011 one in seven small Irish businesses experienced a workplace injury with costs estimated at 18.5 million. Baxter (2013) further states that "*in the services sector this cost was €1,093,966, with the bulk of the costs being attributed to sick pay, medical expenses, cost of replacement staff, personal injury and legal costs*". The cost of a workplace accident to an employer in the service sector on average equalled €2,057 and on average the compensation awarded from the Occupational Injuries Board for workplace-related injuries was €27,000 (Baxter, 2013). According to Baxter (2013) "*a positive and proactive approach to health and safety management can minimise the potential for financial damage to your business*" as well as reducing the "*..damage to your brand and your business reputation*". Therefore, the author believes this recent Health and Safety Authority study only further illustrate the importance of continuous effective management of Occupational Health and Safety for the long term viability of a Veterinary Practice or any Small business.

Procedures and Participants Role:

You will be interviewed by the researcher (myself) about Occupational Health and safety in Veterinary Practice. Interviews will be conducted via telephone as requested by yourself and will last approximately 30 to 60 minutes. The interview will be recorded and transcribed word for word. Material gathered will be treated in the strictest

confidence and will only be available to the researcher, the research supervisor and the marking examiners. The author will endeavour to provide anonymity to all participants where possible. Copies of the transcripts, if requested, can be sent to you, and where appropriate you may add any further comments you feel are of relevance. You may be approached to answer any additional questions which were omitted and which the researcher feel are necessary to the study, but you have the right to ask not to be contacted for any further questions.

If at a later stage you feel that there were certain points that you did not mention, but feel are important - then please feel free to contact me by telephone (087 XXXXXXX) or by e-mail (XXXXXX@gmail.com). The researcher aims to have the project completed and bound by the first week in August.

NB: All material gathered will be treated in the strictest confidence and will only be exclusively available to the researcher, the research supervisor and the marking examiners. If the participant wishes, they can be given a pseudonym to help protect their anonymity where possible.

APPENDIX EIGHT

Interview Participant Consent Form

Name of Researcher: Lisa Sheeran

Name of Participant:

Title of Study: Occupational Health and Safety Management in Irish Veterinary Practices.

I, _____(Participant/Subject) agree to take part in the above named research project, the details of which have been fully explained to me and described in writing. I also certify I understand the details of this study.

Signed: _____(Participant/Subject)

Date: _____

I, Lisa Sheeran (Researcher) certify that the details of this study have been fully explained and described in writing to the best of my knowledge, to the subject named above and have been understood by him/her. All material gathered will be treated in the strictest confidence and will only be exclusively available to the researcher, the research supervisor and the marking examiners. If the participant wishes, they can be given a pseudonym to help protect their anonymity where possible.

Signed: _____ (Researcher)

Date: _____