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Title:

The “globesity” trend: exploring the ethical concerns of registered nurses caring for bariatric surgery patients.

Casey Louise Lowden-Crook

2014

This thesis is a partial requirement for the degree of Master of Nursing by research at The University of Notre Dame Australia, Fremantle campus.

I declare that this dissertation is my own account of my research and contains as its main content, work which has not previously been submitted for a degree at any tertiary institution.

Signed.....

Casey Louise Lowden-Crook

January 2014

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ABSTRACT

Obesity is a major global health problem. The comorbidities associated with obesity (for example: diabetes mellitus type 2 and cardiovascular disease) are multi-system and require continual medical management which places a great strain on the healthcare system. Australia is ranked the 5th most obese population in the world and deaths associated with obesity and obesity related illnesses are estimated at 7,200 per year (Medibank, 2010). This lifestyle disease is now the leading cause of premature death in Australia. The obesity epidemic is blamed on changes in the social, economic and physical environment (obesogenic environments) which have influenced people to over-consume high-energy, processed food at the expense of fresh nutritious food. The World Health Organisation (2011) describes poverty and obesity as inextricably linked.

As the prevalence of obesity increases globally, so does the demand for bariatric surgery. In Australia, hospital admissions for bariatric surgery increased from 500 in 1998 to 17,000 in 2007-2008, at a cost to the public and private sectors of more than \$108 million (Australian Institute of Health and Welfare, 2010). Many physicians and bariatric surgeons promote bariatric surgery as a safe procedure which can result in significant weight loss, thereby reducing the co-morbidities associated with obesity and possible premature death. However, there is an array of surgical and anaesthetic complications associated with bariatric surgery which are directly attributable to the fact the patient is obese.

The attempt to balance the possible risks and benefits of a relatively new treatment such as bariatric surgery becomes a concern for many nurses. According to an American study by Camden (2009/2010) this benefit versus burden debate may give rise to ethical concerns for nurses involved in the care of bariatric surgery patients. The purpose of this present study is to determine if Australian nurses reflect the same or similar concerns as their US counterparts.

This aim of this exploratory qualitative study was to determine if registered nurses expressed any ethical concerns in relation to caring for bariatric surgery patients in the perioperative anaesthetic and recovery room environment. The purposive sample group consisted of nine experienced anaesthetic and recovery room RNs who consented to an interview which was based upon a vignette of a potential bariatric surgery patient. Analysis of data was undertaken with reference to the ethical principles of beneficence, non-maleficence, autonomy, justice, veracity, fidelity and confidentiality. Themes and

concepts were identified in relation to these ethical concepts to determine if the participants had any ethical concerns in relation to the bariatric surgical procedures or caring for the bariatric patients.

Results from the data revealed the participants expressed concern in relation to; a perceived lack of informed consent process, the inequity of access to bariatric surgery for the low socio-economic group without private health insurance, the perception of bariatric surgery being used as a “quick fix”, the view there is a lack of psychological preparation and treatment for bariatric surgery patients, perceived education deficits of nurses related to bariatric surgery and associated health care ethics, the cost of this intervention including the financial impact of equipment, the manual handling risks and the stress of providing high acuity care, the balance of benefits to risks of this surgery, obesity stigma and the lack of longitudinal studies into bariatric surgery patient outcomes.

Findings of this study have implications for nurse education, nurse retention and patient outcomes. Given the current trends in obesity and the trajectory of bariatric surgery, educators need to include into the nursing curriculum and staff development programs, teaching about bariatric surgery including the serious surgical and anaesthetics risks. Also ethical issues need to be highlighted specifically for this surgical intervention such as informed consent, equity of access and resource allocation given the financial cost to the health care system.

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Abbreviations

| | |
|-------|---|
| ABS | Australian Bureau of Statistics |
| AGPHT | Australian Government Preventative Health Taskforce |
| AIHW | Australian Institute of Health and Welfare |
| ANMC | Australian Nurses and Midwives Council |
| APHRA | Australian Health Practitioners Regulation Agency |
| BMI | Body Mass Index |
| BPD | Bilio-Pancreatic Diversion |
| CMBRM | Commonwealth of Massachusetts Board of Registration of Medicine |
| DMAA | Disease Management Association of America |
| DNR | Do Not Resuscitate |
| DVT | Deep Vein Thrombosis |
| EN | Enrolled Nurse |
| HREC | Human Research Ethics Committee |
| ICU | Intensive Care Unit |
| LA | Laparoscopic appendectomy |
| LGB | Laparoscopic gastric banding |
| NHMRC | National Health and Medical Research Council |
| NIHCE | National Institute for Health and Clinical Excellence |
| NSW | New South Wales |
| NZ | New Zealand |
| OECD | Organisation for Economic Co-operation & Development |
| RN | Registered Nurse |
| RYGB | Roux-en-Y gastric bypass |
| SD | Standard deviation |
| UK | United Kingdom |
| UNDA | University of Notre Dame Australia |
| US | United States |
| WA | Western Australia |
| WHO | World Health Organisation |

CHAPTER 1

INTRODUCTION

1.0 Background

The global increase in obesity has become a serious health issue, however, the World Health Organisation ([WHO], 2011) describe this condition as a “preventable” lifestyle disease. Obesity is now the leading cause of death and illness in Australia (Corderoy, 2010) and statistics show that, over the past 20 years, the average weight of Australian adults increased by around 0.5 to 1kg per year (Australian Government Preventative Health Taskforce [AGPHT], 2009). According to James (2005), 2.3 billion people worldwide will be overweight by the year 2015. Considering the positive correlation between childhood and subsequent adult obesity (WHO, 2011), the future health of Australian children is dismal. Although young people may be aware of the stigma associated with being overweight, they may be less aware of the relationship between obesity and co-morbidities (McAlpine, Frisch, Rome, Clark, Signore, Lindroos & Allison, 2010). It has been estimated the overall cost of obesity to Australian society and governments was \$58.2 billion in 2008 alone (Australian Bureau of Statistics [ABS], 2011). If obesity continues to increase at its current rate, the strain on the healthcare system will become critical.

Obesity is described as “an excess of body fat that occurs when energy intake exceeds energy expenditure” (McAlpine et al., 2010, p.305). The causes of obesity are largely attributed to environmental and socio-economic factors. According to Swinburn (2008) the obesity pandemic is the result of the “obesogenic” environment which is defined as “the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations” (Swinburn, Egger, & Raza, 1999: p.564). Such influences include the availability of fast foods that are calorific but nutritionally desolate, limited supermarket access, sedentary lifestyles and high working hours per week. Over the past two decades the occurrence of obesity has evolved from a condition of the wealthy and over nourished to become a commonplace condition of the poor and/or low socioeconomic status (WHO, 2011). To explain this increase, it could be proposed that individuals from low socio-economic status

communities may have a deficit of knowledge about nutrition and food preparation, inability to afford or access fresh nutritious food and little time or funds to engage in exercise of their choice. Such a phenomenon explains why the phrase “too poor to be thin” has come to be.

The explosion of global obesity, now termed “globesity” (Delpeuch, Maire & Monnier, 2009) over recent years has brought with it a host of co-morbidities which are detrimental to health and, if left untreated, can cause premature death. Diseases such as diabetes mellitus type 2, hypertension, coronary heart disease, sleep apnoea, infertility, musculoskeletal problems, some cancers, alveolar hypoventilation, fatty liver, female urinary stress incontinence, gallbladder disease, gastro oesophageal reflux, depression, anxiety and low self-esteem are commonplace problems associated with obesity (Mathus-Vliegen, de Weerd & de Wit, 2004; Pettit, 2009; WHO, 2011). Hospitalisation of patients with these co-morbidities places a massive burden on the health care system, while the inability of the obese person to work and subsequent sick leave puts further demands on the economy.

Global initiatives to address the obesity pandemic have been introduced by many countries. A discussion paper by Mackay (2011) highlighted initiatives such as, promoting physical activity, improving the nutritional content of food in schools, banning food-vending machines and the sale of unhealthy food. Furthermore, the introduction of snack and soft drink taxes, mandatory disclosure of nutritional information on fast-food menus and the restriction of television advertising of foods high in fat, sugar or salt.

Australians and the Australian government also face this global obesity burden. According to the AGPHT (2009), there is no simple, singular approach to reduce the burden of obesity. Attempts have been made to trial a package of interventions, accompanied by monitoring and evaluation. Health promotion campaigns encourage healthy eating and exercise through marketing, new sport and recreational infrastructure and physical activity programs in schools and workplaces. Australia has seen a reduction in advertising targeted at children of calorific, nutritionally desolate food and beverages and efforts to increase awareness of obesity and being overweight among the public. In a further attempt to combat the worldwide obesity pandemic, weight loss surgery, medically known as bariatric surgery, has become more commonplace.

1.1 The upward trend in the bariatric surgery industry

Bariatric surgery has emerged as a surgical weight loss method. This intervention is viewed as an effective treatment option for appropriate candidates with extreme obesity accompanied by obesity co-morbidities who are unable to benefit from non-surgical interventions (Buchwald, 2004; Steinbrook, 2004). The past decade has witnessed a substantial rise in bariatric surgery procedures. Smith, Holman, Morrin and Fletcher (2008) claim that in Australia during 2004, bariatric surgery accounted for 24.2 procedures per 100,000 people, compared to just 1.2 procedures per 100,000 people in 1988. According to the literature, concerns have been expressed in relation to the ethical aspects of bariatric surgery care such as benefit versus burden (Camden, 2009/2010), the relationship between poverty and obesity (Delpeuch et al., 2009; WHO, 2011), “obesogenic” environments (Swinburn et al., 1999), medicalisation of obesity (Saarni, Anttila, Saarni, Mustajoki, Koivukangas, Ikonen & Malmivaara, 2011), education deficits among nurses involved in the care of bariatric surgery patients (Ide, Farber & Lautz, 2008) and inequity of access (Australian Institute for Health and Welfare [AIHW], 2003; Carbonell, Lincourt, Matthews, Kercher, Sing & Heniford, 2005; Delpeuch et al., 2009; Livingston & Clifford, 2004; Talbot, Jorgensen & Loi, 2005).

Nursing practice is guided by the Code of Ethics for Nurses in Australia (Australian Nursing and Midwifery Council, Royal College of Nursing Australia and the Australian Nursing Federation, 2008); therefore, nurses should be aware of any ethical issues which emerge from specific treatment or investigations. Bariatric surgery is one intervention that has attracted discussion about ethical concerns. The issue of inequity of access was possibly recognised because the majority of bariatric surgery is performed in the private sector, yet obesity and poverty have been inextricably linked (WHO, 2011). This inequity raises concern for the breach in the ethical principle of justice, whereby those who cannot afford private health insurance have the least access to bariatric surgery. In Australia, from 2000 to 2004, of all the bariatric surgery performed, 91.4% were conducted in private hospitals and 84.4% of patients during this period had private insurance (Smith et al., 2008). The structure of bariatric surgery funding is such that those who most need the option of this surgery have least access. This relationship between poverty and obesity and the effect of the “obesogenic” environment (Swinburn, 2008) are of significant importance to understanding the increase in obesity rates and treatment options worldwide.

1.2 Types of bariatric surgery

The primary intent of bariatric surgery is for the patient to lose weight. To achieve this, the structure of the stomach and/or intestinal tract is altered in such a way that it results in a reduction in the size of the stomach for food intake and/or the absorption of the food from the intestinal tract. There are several forms of restrictive and/or malabsorptive bariatric procedures, some of which are laparoscopic or open surgery and which may be reversible or permanent. In Australia, approximately 95% of bariatric procedures involve laparoscopic gastric bands (O'Brien, 2010). Procedure choice is reflective of various aspects such as: surgeon preference, healthcare rebates, the patient's body mass index (BMI) and personal choice. Following bariatric surgery procedures, the size of the stomach is significantly reduced; therefore, the patients must adhere to a diet rich in vitamins, minerals and protein and possible dietary supplementation.

1.3 Risks related to bariatric surgery

All surgeries come with some element of risk; however, for the bariatric patient these risks are compounded by firstly, the body habitus of the obese or morbidly obese, and secondly, the comorbidities associated with obesity. The risks associated with bariatric surgery include surgical and anaesthetic risks, the risk of further surgery, long term complications and a possible failure to lose weight. As such, these risks could be viewed as the possible burden in the benefit to burden debate in relation to bariatric surgery. Comparison of the pros and cons of this procedure may enable the patient and those involved in care giving to make a more informed decision about how best to treat the patient's obesity.

1.3.1 Anaesthetic risks

The complex, multi-system nature of obesity comorbidities further complicates an already invasive procedure and anaesthetic. Intraoperatively and postoperatively the obese patient is at greater risk of an adverse event than the average weight person.

Anaesthetic risks associated with bariatric surgery begin with challenging cannulation due to excess adipose tissue and airway problems such as difficult intubation, difficulty maintaining an airway and problematic mask ventilation. Such issues may lead to inadequate oxygen saturation which could impact on the cardiovascular system (Ide et al., 2008). Additional respiratory problems can range

from an increased risk of aspiration, a high risk of atelectasis, elevated oxygen consumption, increased carbon dioxide production necessitating increased minute ventilation and risk of ventilation/perfusion mismatch leading to impaired oxygenation due to reduced functional residual capacity (O'Neill & Allam, 2010). A more in-depth discussion of anaesthetic risks is presented in Chapter 2.

1.3.2 Surgical risks

The two common causes of mortality associated with bariatric surgery are anastomotic leak with sepsis and pulmonary embolism (Aldouri & Dexter, 2009). Surgical complications include: wound infections, wound dehiscence, cholecystitis, gastric wall prolapse, gastro-oesophageal reflux, chest infection and small bowel obstruction (Aldouri & Dexter, 2009). Further risks include: deep vein thrombosis (DVT), damage to nearby organs, hernia, oesophagitis, malnutrition, liver abnormalities, loss of bone density, lactose intolerance, severe anaemia and death (Ide et al., 2008). However, these associated risks are dependent upon the type of bariatric surgery.

1.4 Cost of bariatric surgery

As previously mentioned the financial cost of obesity to Australian society and governments was \$58.2 billion in 2008 (ABS, 2011). In an attempt to combat obesity in 2008, Australian admissions for bariatric surgery rose from 500 in 1998 to 17,000 at a cost to the public and private sectors of more than \$108 million (AIHW, 2010). Cost is attributed to specialised equipment including: longer surgical instruments, bariatric operating tables, increased staffing, treatment of postoperative complications, readmission for further surgical procedures, bariatric beds and wheelchairs and access to Intensive Care Unit (ICU) post operatively. The Australian Medicare program funds 75% of the scheduled fee for private patients in private hospitals and the individual's private health insurance pays the remaining 25% for the laparoscopic gastric banding procedure and hospital fees (Talbot et al., 2005). Non-monetary costs of bariatric surgery include: manual handling injuries, high acuity care resulting in burnout amongst staff and allocation of physical and staff resources to bariatric surgery, away from other areas of need. In essence, all health care costs are exacerbated by the patient's obesity.

1.5 Caring for bariatric surgery patients

Stigma associated with obesity may influence how nurses feel about caring for bariatric surgery patients (Brown, Stride, Psarou, Brewins & Thompson, 2007; Poon & Tarrant, 2009). This surgery and subsequent care may be seen as a high risk, high stress area of healthcare for nurses. Obesity comorbidities and bariatric surgery combine for a high acuity, physically demanding operation, requiring specialised nursing care. As a relatively new surgery, one which is predicted to continue and increase in prevalence, nurses may have ethical concerns in relation to the surgery and care of the patients. A seminal research study by Camden (2009/2010) involving nurses from the United States (US) demonstrated that the application of the ethical principles of autonomy, beneficence, non-maleficence and justice were evident in relation to bariatric surgery nursing care. Camden also described ethical concerns expressed by the bariatric nurse to include patient rights, nursing responsibilities, access to care, medical paternalism, virtue ethics and informed consent. Especially relevant to this study was the importance of bariatric surgery and ethics education for Registered Nurses (RNs) to promote patient advocacy and facilitate nurse-patient communication and education.

Regardless of government weight loss campaigns and the diet industry, obesity continues to increase and subsequently, the demand for bariatric surgery has escalated. However, this has generated ethical concerns for the nurses who care for these patients. In Australia, research on the outcomes of the relatively new but nonetheless popular procedure bariatric surgery is mainly limited to the collection and interpretation of quantitative data undertaken by medical professionals, some of whom currently work in bariatric surgery, while some studies are funded by gastric banding prosthesis companies. Research by nurses in relation to ethical principles in bariatric surgery is sparse. Thus, it is an aim of this study to address that omission. Since bariatric surgery may become the predominant means to lose weight, it is imperative to explore the possible ethical concerns which could impact on the delivery of care by nurses.

1.6 Poverty and obesity

Recent studies into ethics and bariatric surgery have described the effect of the obesogenic environment (Swinburn, 2008) and the relationship between poverty and obesity (WHO, 2011). The AIHW (2003) and Talbot et al., (2005) also expressed ethical concern in relation to the inequity to access for bariatric surgery in Australia. This inequity however, reflects worldwide studies showing that 80% of obese and

overweight people access bariatric surgery through the private system (Smith et al., 2008). Thus, obese people of low socio-economic status are often excluded from bariatric surgery because of their lack of private health insurance. The psychological component of obesity is also of concern to Australian researchers. Studies have described the psychological characteristics associated with obesity such as depression (O'Brien, 2010; AIHW, 2008) and psychological motivations for seeking bariatric surgery (Kitto, Borradaile, Jeffrey, Smith & Villanueva, 2007), which suggests a need for a more holistic treatment of obesity. Indeed, McAlpine et al., (2010) advocate the use of a psychiatric interview involving preoperative assessment of psychopathology, substance abuse, mood disorders, eating disorders, trauma survivorship issues, dietary habits, motivation, expectations and compliance.

More Australian research is needed in areas of bariatric surgery such as: anaesthetic and surgical risks (burden) to potential gains (benefit), the informed consent process, the relationship between poverty and obesity, longitudinal studies on nutritional, weight loss and psychological outcomes of bariatric surgery and obesity stigma.

1.7 Purpose and significance of the study

This study aimed to determine if a small group of RNs in Perth, Western Australia (WA) had ethical concerns in relation to bariatric surgery and the nursing care of bariatric surgery patients. Obesity is now considered to be in epidemic proportions and this major health issue is yet to be resolved successfully by either bariatric surgery or government health campaigns. It is expected therefore that current and future RNs will be expected to provide informed, competent, sensitive, ethical care for the overweight and obese bariatric surgery patient.

This study involved a qualitative, exploratory approach. A purposive sample of nine RNs was achieved by distribution of a flyer through a nursing agency in Perth, WA which employed anaesthetic and recovery room nurses. Data collection was achieved via one on one interviews' with RNs who currently work as anaesthetic and recovery room nurses in the public and private perioperative environments and are involved in bariatric surgery.

A vignette outlined the scenario of "Amanda", a potential bariatric surgery patient with obesity co-morbidities. Collection of data involved a vignette as it provided a description of a situation (in this case, the potential patient; Amanda) to

which the participants were asked specific questions. A vignette was used to help reduce generalisations and stigmatisation of the obese person and/or bariatric surgery patients. The interviews were held at a location of the participants' convenience.

Results generated from this research may enable the identification of ethical concerns of RNs involved in the anaesthetic and recovery room care associated with bariatric surgery. Such results could guide clinical and ethical education of nurses which in turn may help improve both patient care and nurse retention in this setting.

1.8 Outline of the thesis

This thesis is presented in six chapters. Chapter 1 introduced the major health issue of obesity, the impact of the comorbidities associated with this disease on the person, community and the health care system. Chapter 2 presents a literature review and discussion of the impact of obesity and comorbidities associated with this global pandemic disease. Included are the global health promotion initiatives designed to halt the obesity trend, the financial impact of obesity and bariatric surgery on the health care system and any ethical concerns RNs may have in relation to caring for bariatric patients. Chapter 3 describes the research study methodology. Results from the data analysis are presented in Chapter 4. These results are discussed and interpreted in Chapter 5. Finally, Chapter 6 presents the conclusions and recommendations.

CHAPTER 2

LITERATURE REVIEW

2.00 Global obesity

The continuing increase in obesity is well documented and repeatedly discussed in academic literature, medical reports and current news programs. The WHO (2011) used BMI as a formula ($BMI=kg/m^2$) to define being overweight, that is having a BMI of 25+, obese having a BMI of 30+ and morbid obesity having a BMI of 40+. In 2008, globally 1.6 billion adults were overweight which equates to 1 in 10 adults (WHO, 2011). Of these, over 400 million adults were obese. James (2005) predicted that by 2015 the number of obese people worldwide will reach 704 million and 2.3 billion will be regarded as overweight. In the US in 2006, an estimated 97 million adults were deemed overweight or obese (Disease Management Association of America [DMAA], 2007). By 2020, it is estimated that approximately 75% of Americans will be overweight (Organisation for Economic Co-operation and Development [OECD], 2010). The same scenario is reflected in the United Kingdom (UK) statistics, where 24% of people aged over 16 years were classified as obese (Jaunoo & Southall, 2010).

Regrettably, Australia is not exempt from this major health issue. In 2009 nearly 22% of adults and one quarter of children were considered overweight or obese (AGPHT, 2009). By 2020, 65% of Australians are estimated to be overweight (OECD, 2010) and by 2025, close to 80% of all Australian adults and a third of all children are predicted to be overweight or obese (AIHW, 2008). These statistics confirm that obesity is a significant global health catastrophe and recognised by the WHO as such. Obesity, according to the WHO (2011) is “preventable” and although this is so, obesity is currently the second leading cause of premature death in developed countries (Wen, Orr, Millett and Rissel, 2006). Significantly, obesity has overtaken smoking as the leading cause of premature death and illness in Australia (Corderoy, 2010) and is thought to reduce life expectancy by five to 20 years (Hensrud & Klein, 2006; Sjostrum, Narbro & Sjostrum, 2007).

It is evident that Australia cannot ignore this “*globesity*” trend, a term penned by Delpeuch et al., (2009), and now adopted by the WHO (2011). What also must be taken

into account are the human cost (deaths and obesity related illness) and the financial cost of obesity on the health care system. For example, the financial cost of obesity and obesity related illness in the US is approximately \$90 billion annually (Vastag, 2004). This is a phenomenal amount of funds, which is channelled into treating a predominately preventable health problem. According to Olsen, Dixon, Banwell and Baker (2009), Australia is ranked the fifth most obese population in the world and deaths associated with obesity and obesity related illnesses are estimated at 7200 per year (Medibank, 2010). In 2008, the ABS (2011) estimated overall cost of obesity to Australian society and governments was \$58.2 billion. The loss of productivity in the workplace (due to obesity related sickness), is estimated at \$3.6 billion and the cost to the health care system to treat those sick people is estimated at \$2 billion.

These current estimates of global obesity raise grave concerns about the future health of children. According to Fache (2010), an obese child has a 70% chance of becoming an overweight or obese adult. In 2011 the WHO estimated globally the number of overweight children under the age of five is over 42 million. This estimate is very concerning in itself and even more so when it is likely that in the next 25 years obesity in children could increase further. The AGPHT (2010) statistics bear witness to this worrying trend. From 1985 to 2007 the proportion of children aged 7-15 years who were overweight or obese increased in boys from 11% to almost 24% and in girls from 12% to almost 27%. Furthermore, a tardy response by Australian and New Zealand (NZ) governments to monitor this epidemic in obesity may have compromised the ability of these countries to recognise and combat this significant health issue. The most recent national surveys of childrens' heights and weights in Australia occurred in 1995: however, NZ did not collect national childhood data until 2003 (Swinburn, 2008).

2.01 Diagnosis of obesity using the Body Mass Index (BMI)

The diagnosis of obesity is calculated by the use of the Body Mass Index (BMI = kg/m^2) formula which has been accepted worldwide. The WHO (2011) used this formula to define being overweight, that is having a BMI of 25+, obese having a BMI of 30+ and morbid obesity having a BMI of 40+. The BMI, originally termed the Quetelet index, was devised by Adolphe Quetelet, a Belgian mathematician, between 1830 and 1850 (Welch & Craggs, 2010). The BMI is an approximate calculation for human body fat based on an individual's weight and height; however, the BMI does not measure the percentage of body fat. Contour lines on the BMI chart depict the

significance of different cut-offs for weight and height and different values of BMI. Keys in 1972 espoused that the BMI was the best formula to determine body fat percentage among ratios of weight and height. However, Keys warned BMI, although suitable for population studies was not so for individual assessment. Nonetheless, being such a simple formula, it was adopted enthusiastically by health professionals. However, reliance on the BMI formula was not Quetelet's original intent. It was meant to be used as a simple means of classifying sedentary (physically inactive) individuals, or to describe the average body composition of different populations. As stated the BMI has limitations and is not suitable for all cases; for example, pregnant and breastfeeding women, children, those with Down Syndrome, seriously ill people and those who are bed or wheelchair bound, the elderly (due to loss of muscle mass), amputees, those with fluid disturbances, those undergoing renal dialysis, athletes and those who have an increased muscular mass.

Given the BMI was devised approximately 160 years ago one might postulate that over this time period many changes have occurred, impacting on human physical development. These changes include improvements in nutrition, living conditions, public health education and medicine. Currently, the BMI is not viewed as the only method to categorise obesity. More recently, it is waist circumference and the presence of obesity with associated co-morbidities (e.g. diabetes mellitus type 2) that are now judged to be a more accurate indicator (DMAA, 2007). According to the DMAA (2007), a man is considered obese with a waist circumference of 40 inches (101.6cm) or greater, for a woman a waist circumference of 35 inches (88.9cm) or greater. The presence of excess abdominal fat, out of proportion to total body fat is an independent predictor of risk factors and mortality. Waist circumference is positively correlated with abdominal fat content. Other methods of identifying obese populations include; use of callipers (skin-fold measurement), underwater weighing and computerized topography (DMAA, 2007).

2.02 Medicalisation of obesity

The failure to acknowledge psychological and socio-economic causes of obesity could mean that obesity could be promoted as a surgically treatable disease rather than an "eating disorder". The question of whether obesity should be viewed and treated as a disease is one which may lead to varying attitudes on bariatric surgery and the treatment of the obese. According to Saarni et al. (2011) medicalisation of a health problem, such

as obesity, could become “ethically acceptable” in today’s society if technology were available to solve this health problem. The obvious dilemma for bariatric surgery is that its success, in terms of weight loss, relies heavily upon the patient adopting a healthy lifestyle, not just on the surgery itself. If obesity is considered a disease, bariatric surgery appears to work only on the treatment aspects of obesity, not on the causes or prevention. Thus psychological treatment in combination with other treatments may improve the adaptation to a healthy lifestyle. Surgery and prevention are completely different pathways, attracting or repelling the obese and the health care professional depending upon their opinion, and motivation (Saarni et al., 2011). The substantial profit the medical profession creates from the production of an “obesity epidemic” combined with the advertisements for bariatric surgery describing obesity as a serious disease requiring professional treatment is further evidence of the medicalisation of obesity (Hofmann, 2010). Furthermore, the medicalisation of obesity places an expectation on the obese population in that they must want to get better and recover from this “disease” and make lifestyle changes (Saarni et al., 2011).

2.03 Factors which have influenced the obesity trend

With the significant improvements in nutrition, living conditions, public health education and medicine, one may question what circumstances have brought about the significant increase in global obesity? A review of the literature showed that the causes of obesity are complex and varied, ranging from genetic, endocrine, dietary, lifestyle, psychological, environmental and socio-economic influences. Aldouri and Dexter (2009) pointed out that genetic and metabolic disorders are often deemed responsible for obesity but these conditions are rare. Such disorders could influence weight gain but are not solely responsible. Disorders such as the following can influence weight gain: Prader-Willi: a genetic disorder characterised by short stature, mental retardation, hypogonadism, small hands and feet and upper body obesity; and Cushing’s syndrome, an endocrine disorder associated with hypothyroidism (Aldouri & Dexter, 2009).

However, it is the relatively recent changes in lifestyle, especially since the 1960’s, which have been proposed as the primary cause of the current obesity trend (MacKay, 2011). Changes in the social, economic and physical environment have influenced people to over-consume high-energy, processed food at the expense of fresh nutritious food. A systematic review by Giskes, van Lenthe, Avendano-Pabon and Brug (2010), of studies of dietary intakes among adults (i.e. ≥ 18 years) determined that the

prevalence of overweight and/or obesity is greatest in adulthood. Significant weight gain continues to occur in early and middle adulthood. Furthermore, body weight was most consistently associated with features of the environment in which a person lived. That is people who reside in areas with greater access to supermarkets or have less access to takeaway outlets had a lower prevalence of overweight/obesity. In contrast, people who live in areas with limited supermarket access or a greater accessibility to takeaway outlets have a greater propensity to develop obesity. This phenomenon is now known as the “obesogenic” environment and described as, “the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations” (Swinburn, Egger & Raza, 1999, p.564).

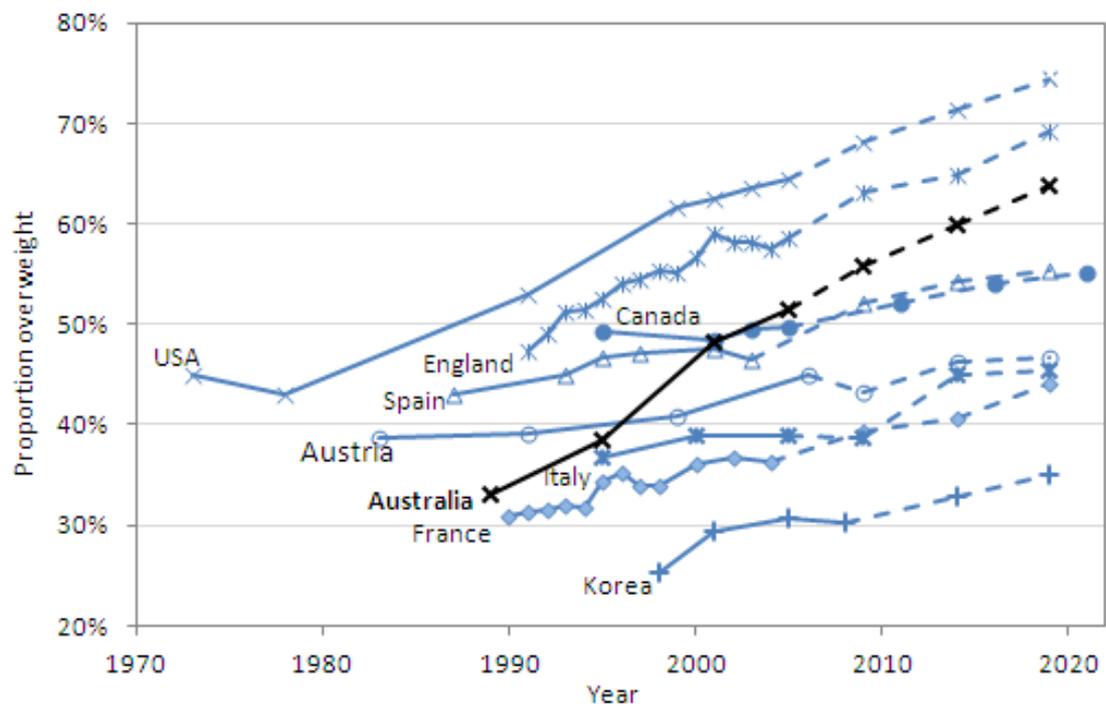
2.04 Sedentary lifestyle and obesity

The increase in obesity has been blamed on many factors such as the surge in technology and the dependence on the car, which has influenced the adoption of a sedentary lifestyle. A study by Cameron, Zimmet, Dunstan, Dalton, Shaw, Welbourn, Owen, Salmon and Jolley (2003) involving 20347 participants from 42 randomly selected districts across Australia found that obesity was linked to being highly dependent on television viewing. While viewing television, there was a tendency to eat fast foods. Owing to the distances between places in Australia, there is a heavy dependence on the motorcar which is used to travel to work, go the shops and take the children to school. A study by Wen et al., (2006) which involved 2810 participants showed that the more time spent travelling in a car, there was a six percent increased likelihood of obesity with each additional hour per day spent in a car. Coupled with the dependence on the automobile and public transport are other sedentary activities such as watching television, playing video games and surfing the internet. These pursuits are to the detriment of healthier lifestyle activities. A study by Walls, Magliano, McNeil, Stevenson, Ademi, Shaw and Peeters (2010) found poor diet quality, consumption of energy dense foods, consumption of meat, quitting smoking and higher television viewing time have been associated with increased waist circumference. Pettit (2009) claims that if a person has a history of parental obesity, a high birth weight, or is of low socio-economic status then that person is at an increased risk of becoming overweight or obese. A correlational study enables an examination of the relationship between variables however, this design cannot test a cause and effect relationship thus the

activities mentioned in previous studies may not directly be the cause of obesity (Schneider, Whitehead, Elliott, Lobiondo-Wood and Haber, 2007).

The ABS (2013) statistics depict the average Australian as one who works an average of 34.4 hours per week. A long working week means that there is little opportunity and time for individuals and families to engage in physical exercise and prepare nutritious food. Thus, the aforementioned factors can indeed increase the risk of obesity and as a result increase the risk of developing the co-morbidities associated with obesity: coronary heart disease, type 2 diabetes mellitus, sleep apnoea, osteoarthritis, gallstones, hypertension, hyperlipidemia and physical inactivity (Pettit, 2009). The obesity rates in Australia have been increasing faster than in any other OECD country in the last 20 years. The OECD (2010) predicts the proportion of people overweight is projected to rise a further 15% during the next 10 years (see Figure 2.1).

Figure 2.1 Past and projected overweight rates by the OECD



Goris, Petersen, Stamatakis & Veerman (2009) estimated the contribution of television food advertising to the prevalence of childhood obesity among six to eleven year old children in Australia, Great Britain, Italy, The Netherlands, Sweden and the US. In this study, data from contemporary representative studies (published between 2000 and 2008) on the prevalence of childhood obesity and on TV food advertising

exposure was entered into a mathematical simulation model. The study found that in the absence of television food advertising, between 16%-40% of US children; 10-28% of Australian and Italian children and 4-18% of children in Great Britain, Sweden and The Netherlands who are obese would not be so. In 2005, it was estimated that fast food companies spent upwards of AU\$110 million to promote their brands across mainstream media (Scully, Dixon & Wakefield, 2008). Advertising is a highly lucrative industry and to date the food industry refuses to voluntarily restrict promotion of unhealthy foods, responding only to continuous statutory enforcement of regulations. In essence, the food industry has largely been left to self-regulate. In 2007, nearly 17000 fast food outlets served meals worth \$1.4 billion to Australians, which comprised 44% of meals served outside the home. Given the population of Australia is approximately 23 million (ABS, 2013), this is an astounding amount of fast food and therefore supports the premise that people are consuming less fresh foods to the detriment of a healthy nutritious diet. One may question the ethical and moral standing of companies involved in fast food who continue to saturate the media with advertisements for fast food when one considers the possible impact such food may have on the health of their customers.

2.05 Government health promotion campaigns

According to Swinburn (2008), as yet no country has managed to reduce the burden of obesity using public health approaches. MacKay (2011) observed the increase in obesity continues irrespective of Australian government health promotion campaigns. These campaigns encourage healthy eating and exercise through the medium of social marketing, new sport and recreational infrastructure and physical activity programs in schools and workplaces. From 2011, Australian government campaigns such as the Healthy Children Initiative will make available \$325.5 million for states and territories to implement health promotion programs and activities in pre-schools, schools and child care settings. Furthermore from 2008, the government provided \$12.8 million over four years to implement the Stephanie Alexander Kitchen Garden Program, which was designed to use the school setting to encourage healthy eating. Students were encouraged to learn how to grow, harvest, cook and share fresh food thereby providing a better chance of positively influencing children's food choices. Up to 190 government primary schools received funding through this program.

MacKay (2011) described a recent national survey which reported high levels of support for the Australian government to address obesity, including stronger regulation of unhealthy food advertising to children, nutrition labelling, regulation of nutritional composition of products and unhealthy food taxes. The New South Wales (NSW) government has made some progress by passing an act in 2010 which required fast food outlets to display the kilojoule content of products on menus and menu boards. MacKay (2011) described examples of initiatives implemented overseas such as the US's efforts to increase physical activity and improve the nutritional content of food in schools. This initiative aimed to impose a tax on snacks and soft drink, and required the disclosure of nutrition information on fast-food menus. In the UK and South Korea, restriction of television advertising of foods high in fat, sugar or salt has been implemented. In Latvia, the sale of these previously mentioned unhealthy food in pre-school and schools is prohibited entirely. In France, legislation requires fast food advertisers to choose between paying a levy and broadcasting a health message whilst food-vending machines are prohibited in schools. Sweden had spearheaded the campaign against obesity as early as 1991. In that year advertising of fast food aimed at children under the age of 12 years was banned as a measure to protect the rights of children (Goris et al., 2009). At this juncture one might suggest the Australian government has been slow to follow their global counterparts to initiate ways to decelerate the growing numbers of obese children and adults.

In recent years several health promotion campaigns have been implemented by the Australian government; however, these attempts have made little impact on the continuing increase in obesity in the community. In 2009, the "Draw the Line" campaign (drawthelinewa.com.au) was aimed at young adults from low socio-economic and indigenous backgrounds with the aim of promoting a healthy diet, lifestyle and exercise to reduce the incidence of obesity. The following year a \$500 million national "Measure Up" (measureup.gov.au) campaign was launched to encourage the community to decrease the risk of chronic problems associated with obesity by reducing their waist measurement. In 2010 a further \$59 million was committed to the "Measure Up" campaign (AGPHT, 2009).

Realistic concern about the impact of obesity on health was voiced by a former Queensland Premier Anna Bligh who stated "Let's be frank, obesity is killing us" – this hard hitting statement might have reached the conscience of some individuals who needed to heed this message. To address this health dilemma, Bligh suggested inviting

English celebrity chef Jamie Oliver to Australia to establish the “Ministry of Food”. This venture involved a cooking centre to provide classes and demonstrations on healthy, quick and tasty meals, at a cost of \$US2.5 million over four years (The West Australian, 2010). In 2013, Jamie Oliver’s “Ministry of Food” program had two food centres in Victoria and Queensland as well as multiple mobile food kitchens in operation in regional areas. In 2014, mobile food kitchens will be established multiple regional areas across Australia. One might postulate that this initiative is an inexpensive option given the many millions spent on previous health promotion campaigns; however, research is yet to be undertaken to determine if this venture has been effective in reducing obesity in the Australian population. Oliver’s interest in encouraging a nutritious diet began in 2005 when he challenged the UK government to provide healthy, nutritious and economical school meals. This challenge resulted in the creation of the Children’s Food Trust (2013) (formally “School Food Trust”), a charity and specialist advisory board to the UK government on school meals. Prior to Oliver’s health initiative, journalists had identified the failure of state and local government to implement a strategy to confront the problem of unhealthy school food. O’Leary (2010), a journalist, was strident about the failure of Australian government campaigns to address obesity. She identified this failure related to firstly, the number of confusing messages broadcasted to the public, and secondly, the small budget allocated to support health campaigns and initiatives compared to the massive commercial promotional budgets. Further, O’Leary (2010) explained the government would spend a further \$11 million over three years to resolve the issue of confusing messages about obesity. What seems to be omitted from these campaigns is the link between low socioeconomic status and obesity and ever increasing access to fast food cheap food and the constant advertising of fast foods. It is evident that Australia should be more proactive to implement a decisive, interventionist policy to enhance awareness that eating nutritious food and how this change can lead to a healthier life for adults and children.

2.06 Potential co-morbidities associated with obesity and possible interventions

As a larger proportion of the population becomes obese, the strain on health care provision also intensifies. Obesity is extremely detrimental to health and can result in complex co-morbidities, such as hypertension, diabetes mellitus type 2, coronary heart disease (Pettit, 2009) musculoskeletal disorders, some cancers, alveolar hypoventilation, fatty liver, female urinary stress incontinence, gallbladder disease, gastro oesophageal

reflux, infertility and obstructive sleep apnoea (WHO, 2011). According to Ide et al. (2008), obese people are often malnourished. They have protein deficiencies, are prone to venous ulcers, varicose veins and peripheral oedema, all of which can result in poor healing. Further, the obese population is also prone to psychological problems such as increased rates of depression, anxiety and low self-esteem (Mathus-Vliegen et al., 2004). Another consequence of obesity is the possible restriction of everyday activity, due to musculoskeletal disorders such as osteoarthritis, a highly disabling degenerative disease of the joints (WHO, 2011). Without effective intervention there is the real risk of premature death as a result of these major associated diseases.

The diet industry is thriving because of the acceleration of global obesity and leaders such as Jenny Craig, Weight Watchers and NutriSystem dominate a \$60 billion global diet industry (Lemonnier, 2008). Adherence to a healthy eating and exercise plan to lose weight is a long-term commitment and some individuals may find this very difficult. According to Medibank (2010) dieting, physical activity, counselling and other lifestyle interventions have a success rate of 11%, pharmacological intervention 8% and surgical interventions 28%. Thus, for some individuals bariatric surgery may be seen as a viable option (McAlpine et al., 2010).

2.07 Bariatric surgery as an option to lose weight

The term bariatric comes from the Greek words *baros* (weight) and *iatreia* (medical treatment) (Ide et al., 2008). Bariatric surgery is considered effective only for specifically chosen, motivated patients (McAlpine et al., 2010). However, the internet is replete with announcements which recount that bariatric surgery is safe and a suitable means to lose weight. Websites provide information about the type of person who is eligible for the surgery and how to access bariatric surgery services. These advertisements do not provide all the possible complications associated with the surgery, anaesthetic or long term implications. The intense promotion of bariatric surgery may have added to the significant increase in demand for this intervention. From 1988 to 2004, bariatric surgery in WA has increased 20 fold within the general population and 13 fold within the obese population (Smith et al., 2008). In essence, these statistics demonstrate that individuals who access bariatric surgery are not in all cases obese, but possibly overweight or of normal BMI.

O'Brien (2010) reported that in 2008, it was estimated that a total of 344, 000 bariatric procedures were performed worldwide. In 2004 there were 144,000 bariatric

surgical procedures performed in the US (Ide et al., 2008). In Australia, hospital admissions for bariatric surgery increased from 500 in 1998 to 17,000 in 2007-2008 at a cost to the public and private sectors of approximately \$108 million (AIHW, 2010). The expense of bariatric surgery is attributed to the fees charged by the surgeon, anaesthetist, operating theatre, hospital staff and accommodation. To perform this surgery and to provide appropriate care, special equipment is also needed. This specialised equipment is costly and unique to bariatric surgery patients since instruments, monitors, beds and wheelchairs have to be larger to accommodate obese patients.

2.08 Types of bariatric surgery procedures

There are several forms of bariatric procedures: laparoscopic or open surgery, reversible or permanent, and restrictive and/or malabsorptive. Laparoscopic surgery is also called minimally invasive surgery or keyhole surgery and is a modern surgical technique in which operations in the abdomen are performed through small incisions. Restrictive bariatric procedures refer to surgery which incurs a temporary or permanent restriction in the size of the stomach. Malabsorptive procedures result in a significant change in absorption of intake through the intestinal system. Worldwide, in 2008, the Roux-en-Y gastric bypass (RYGB) (both laparoscopic and open surgery) was the most common (47%) of the bariatric procedures performed. This was followed by gastric banding (42%), sleeve gastrectomy (5%) and Bilio-Pancreatic Diversion (BPD) (2%) (O'Brien, 2010). The preference of each operation varies, for example, more than 95% of bariatric surgery in Australia involves gastric banding, about 50% gastric banding and 50% RYGB in Europe and the US and nearly 100% RYGB in South America (O'Brien, 2010). In Australia the three bariatric procedures routinely performed are the gastric bypass, sleeve gastrectomy and laparoscopic gastric banding (LGB) (Aldouri & Dexter, 2009).

The popularity of gastric banding in Australia may be related to the fact the procedure is less invasive (a laparoscopic method) and it can be reversed (Smith et al., 2008). Preference for LGB may also reflect that follow up care is fully subsidised by Medicare (O'Neil, 2010). The surgical procedure for a LGB involves placement of a band around the most proximal part of the stomach. When saline is infused into the band, via a subcutaneous port, the balloon expands thereby reducing the size of the proximal stomach. The intention of this procedure is to increase the feeling of satiety

before and after eating (O'Brien, Dixon, Laurie, Skinner, Proietto, McNeil, Strauss, Marks, Schachter, Chapman & Anderson, 2006) which results in less food being consumed.

The sleeve gastrectomy procedure originated in the 1970s and involved resection of the body of the stomach to create a long, narrow, gastric tube which results in a small gastric pouch, thus restricting the available space for food intake (Aldouri & Dexter, 2009). This resection of the stomach results in the reduction of the hormone ghrelin which is thought to be responsible for appetite (Ide et al., 2008).

The RYGB combines restrictive and malabsorptive techniques. This procedure was devised in the 1960s by an American surgeon, Edward E. Mason, who observed that patients who had undergone surgery for peptic ulcers often lost weight (Ide et al., 2008). The RYGB procedure involves the closing of the usual exit of the stomach, the pyloric sphincter, which leads to the duodenum. Following this, a segment of the resected lower intestine (jejunum) is attached to the small, proximal pouch of the stomach (Ide et al., 2008). This procedure results in food bypassing a large portion of the small bowel where absorption of nutrients normally occurs (Medibank, 2010).

The Bilio-Pancreatic Diversion, which accounts for only 2% of all bariatric surgeries, involves removal of part of the stomach to limit intake (restrictive component) and bypass of a section of the small intestine (malabsorptive component) by fashioning of a long limb Roux-en-Y anastomosis. Just beyond the gastric pylorus, the duodenum is divided and the proximal segment is anastomosed to the segment of ileum which then becomes the alimentary channel. This segment is then anastomosed to the segment of intestine which emanates from the duodenum (pancreatobiliary channel) at approximately 50 to 100cm from the ileocecal valve. The refashioned alimentary tract allows for a very short channel for digestion and absorption of food (Ide et al., 2008).

2.09 Possible benefits of bariatric surgery

For many physicians and surgeons, bariatric surgery is considered a safe procedure which can result in significant weight loss, thereby reducing the co-morbidities associated with obesity and possible premature death (MacAlpine et al., 2010; O'Brien, Brown & Dixon, 2005). Weight loss, particularly loss of visceral fat, is associated with improved insulin sensitivity and glucose disposal and reduction in free

fatty acids, interleukin-6 and tumour necrosis factor- α levels (Foley, Benotti, Borlase, Hollingshead & Blackburn, 1992).

If weight loss is achieved, the obesity co-morbidities can be reduced or reversed. Loss of visceral fat often leads to improvements in gastro-oesophageal reflux disease, urinary incontinence, hypertension, cardiac function and venous stasis. The musculo-skeletal system also benefits from a reduction in weight load on joints. Sleep apnoea may resolve following a reduction in neck adipose tissue, as too may asthma. Weight loss is associated with resolution of polycystic ovary disease and fertility problems. Finally, psychosocial health and quality of life may benefit since loss of weight may improve confidence, motivation to partake in social activity and perhaps exercise (Jaunoo & Southall, 2010). In an observational two cohort study by Christou, Sampalis, Liberman, Look, Auger & McLean (2004) which involved a treatment cohort (n= 1035) and a control group (n= 5746) matched by gender age and lack of any obesity co-morbidities. The study found that taking into account the risk of death associated with surgery, patients who had undergone a bariatric procedure were still more likely to be living, one year after surgery compared with those managed more conservatively.

Bariatric surgery is recommended for extreme obesity when less invasive methods have failed and the patient is at high risk for obesity-associated morbidity and mortality (National Health and Medical Research Council [NHMRC], 2003). Comparison of the long-term survival of patients after gastric banding with a community group who were obese showed a 72% reduction in the relative risk of dying (Peeters, O'Brien, Laurie et al., 2007). A study based in the Netherlands by Mathus-Vliegen et al., (2004) involved the administration of the "Health and Related Quality of Life" questionnaire to 50 morbidly obese subjects (pre and one year after bariatric surgery) and a 100 normal weight subjects. Findings showed that following significant weight loss the subjects reported a decrease in health distress, an improvement in wellbeing and a perception of being more attractive. However; regardless of the benefits, surgical and anaesthetic complications which may result from bariatric surgery encompass significant risk.

2.10 Possible risks of bariatric surgery

2.10.1 Possible anaesthetic risks

Anaesthesia for the obese patient carries higher risk than anaesthesia in the non-obese population. The reason for this increased risk is a combination of obesity

comorbidities and the physical limitations of the obese body. The particular anaesthetic risks associated with bariatric surgery relate to the difficulty in maintaining an airway, difficult intubation and mask ventilation and inadequate oxygen saturation which could impact on the cardio thoracic system. Anaesthetic complications are worsened by pre-existing increased cardiac afterload, decreased oxygen supply and an increased risk of coronary artery disease and left ventricular hypertrophy (Ide et al., 2008). Right ventricular failure can be caused by chronic hypoxaemia, hypercarbia, polycythemia and pulmonary hypertension. Respiratory problems include an increased risk of aspiration (Ide et al., 2008), a high risk of atelectasis, elevated oxygen consumption, reduced functional residual capacity, increased carbon dioxide production necessitating increased minute ventilation and risk of ventilation/perfusion mismatch leading to impaired oxygenation (O'Neill & Allam, 2010).

Failed intubation presents a critical situation due to the low chance of optimal mask ventilation, worsened by reduced oxygen reserves and increased oxygen consumption (Ide et al., 2008). Reduced cervical neck mobility affects vocal cord visualisation during intubation as well as partial airway obstruction due to fatty pads in the oral pharynx. Postoperatively the problems continue with an increased risk of nausea and vomiting which requires an extensive antiemetic regime, increased risk of DVT and thromboembolism. Furthermore, opioid analgesia raises the risk of respiratory depression, since fatty tissue delays medication absorption into the bloodstream and later stores medications (Ide et al., 2008).

2.10.2 Possible surgical risks

Complications and mortality rates attributed to bariatric surgery vary substantially depending on the type of surgery conducted. A study by Smith et al., (2008) undertaken in WA which involved 1403 bariatric surgery patients reported that 52.4% ($P < 0.001$) of participants who had a bypass type of bariatric surgery (e.g. RYGB) experienced complications in the 30 day post-operative period compared to 8.3% who underwent reductive surgery (LGB and sleeve gastrectomy). This same study showed short-term (30-day) mortality in the cohort was 0.07%. Furthermore, cumulative mortality at five years following surgery was 1.0% in patients having gastric reduction and 5.0% in patients having bypass-type surgery.

A systematic review of the literature pertaining to bariatric surgery showed that mortality following LGB occurred in 1 in 2000 (Chapman, Kiroff, Game et al., 2004) or

1 in 3000 (Maggard, Shugarman, Suttorp et al., 2005), and 10 to 15 times less than for gastric bypass surgery in the same reviews. A US study of 500 patients following laparoscopic gastric banding surgery (restrictive) found that 12-20% required follow up surgeries to correct complications (Ide et al., 2008). O'Brien's (2010) Australian study reported 10% of patients' required revisional surgery in the ten-year period following gastric banding. He concluded that perioperative risk is significant with gastric bypass and revisional procedures may be required following both restrictive and malabsorptive procedures. Table 2.2 presents research which has investigated the mortality, cumulative mortality, morbidity/complications, and weight loss percentages at six months post-surgery and follow up surgery/re operation rates. This table provides evidence of the wide variation in surgery outcomes.

Table 2.2 Comparison in outcomes for bariatric surgery subtypes

| Metric | Gastric banding | Sleeve gastrectomy | Gastric bypass (Roux-en-Y) | BPD |
|--|---|--|---|---|
| Mortality : Short Term | .05% (Chapman et al., 2004) 0.7% (Smith et al., 2008) 0.07% (Chapman et al., 2004) 0.03% (Maggard et al., 2005) 0.1% (Buchwald, 2004) | .31% (O'Brien et al., 2006) 0.7% (Smith et al., 2008) | .44-1.9% (O'Brien, 2010) 0.5% (Chapman et al., 2004) 0.5% (Buchwald, 2004) | 1% (Buchwald, 2004) 2% (Jaunoo & Southall, 2010) |
| Mortality : Cumulative – 5 years | 1% (Smith et al., 2008) 5.02% Sjostrom et al., 2007) | 1% (Smith et al., 2008) | 5% (Smith et al., 2008) 0.44% (Flum, Belle & King et al., 2009) 1.9% (Flum & Dellinger, 2004) 5.02% Sjostrom et al., 2007) | 5% (Smith et al., 2008) |
| Complications | 8.3% (Smith et al., 2008) 18% (O'Brien et al., 2006) | 8.3% (Smith et al., 2008) | 52.4% (Smith et al., 2008) | 52.4% (Smith et al., 2008) |
| Weight loss at 6 months (% of initial weight lost) | 13.8% (O'Brien et al., 2006) 21.6% (N.I.H.C.E., 2006) | | | |
| Further operation required | 10% (O'Brien, 2010) 13% (O'Brien et al., 2006) 12-20% (Ide et al., 2008) 7% (Smith et al., 2008) 2.2% (Sjostrom et al., 2007) | 7% (Smith et al., 2008) 12-20% (Ide et al., 2008) | 2.28% (O'Brien, 2010) 49% (Smith et al., 2008) 12-20% (Ide et al., 2008) | 49% (Smith et al., 2008) |

It must be stressed that no surgery is without an element of danger, however for bariatric patients there are many hazards. The two common causes of mortality are anastomotic leak with sepsis and pulmonary embolism (Aldouri & Dexter, 2009).

Surgical complications include: wound infections, wound dehiscence, cholecystitis, gastric wall prolapse, gastro-oesophageal reflux, chest infection and small bowel obstruction (Aldouri & Dexter, 2009). Further risks include: DVT, damage to nearby organs, hernia, oesophagitis, malnutrition, liver abnormalities, loss of bone density, lactose intolerance, severe anaemia and death (Ide et al., 2008). The following are the possible complications associated with the different types of bariatric procedures. Refer to Table 2.2.

- Complications specific to laparoscopic banding include: splenic injury, oesophageal injury, wound infection, band slippage, band erosion, band intolerance and band migration, reservoir deflation/leak, persistent vomiting, failure to lose weight and acid reflux (Jaunoo & Southall, 2010).
- Complications specific to sleeve gastrectomy include: leakage from stomach, vomiting from overeating and because the stomach is a muscular organ it can expand to approximate the original size 6 to 12 months post operatively (Jaunoo & Southall, 2010) and that the sleeve will fail to maintain acceptable levels of weight loss in the medium term as the tube of residual stomach inevitably expands (O'Brien, 2010).
- Complications specific to RYGB include: anastomotic leak, acute gastric dilatation, delayed gastric emptying, stricture formation causing vomiting, incisional hernia, intestinal obstruction (Jaunoo & Southall, 2010), dumping syndrome, postprandial diarrhoea, palpitations, sweating, weakness, dyspnea, flushing, nausea, abdominal cramping, vomiting and syncope which occurs because sugars enter the small intestine without being diluted by gastric secretions (Pettit, 2009) and alcohol intolerance (poor metabolism) (Ide et al., 2008).
- Complications specific to BPD include: loose stools, stomal ulceration, bowel obstruction, offensive body odour, foul smelling stools and flatus, anastomotic leak, anastomotic ulceration, hypoalbuminaemia, severe anaemia, vitamin A, D and K deficiency and alopecia (Jaunoo & Southall, 2010). A US study (Livhits, Mercado, Yermilov, Parikh, Dutson, Mehran & Gibbons, 2012) demonstrated following bariatric surgery 20-30% of patients will fail to achieve successful weight loss.

- Should the person achieve significant weight loss following surgery there could be the outcome of excessive loose skin which may impact negatively on a persons' self-esteem. Thus, further surgery may be required to remove the excess tissue. Furthermore, the person may have to deal with preventing nutritional deficiencies, medication management for comorbid conditions and assistance may be required for psychosocial adjustments (Ide et al., 2008).

2.10.3 Outcomes and long-term concerns of bariatric surgery

The following statistics demonstrate the substantial variation in gastric bypass mortality rates between the US and WA. A US study reported that 16 patients died after weight loss surgery in just over a year and a half (Commonwealth of Massachusetts Board of Registration of Medicine [CMBRM], 2005). However, study results vary greatly as the US implemented longitudinal assessment of bariatric surgery (Flum et al., 2009) found a 0.44% mortality rate five years postoperatively for gastric bypass procedures. In a WA study (Smith et al., 2008) reported cumulative mortality at five years was 5% in patients having bypass-type surgery.

2.11 Bariatric surgery overview

In terms of weight loss, an Australian study (National Institute for Health and Clinical Excellence [NIHCE], 2006) found that at two years post gastric banding surgery patients had an average of 21.6% of initial weight loss and 87.2% of excess weight lost while the conventional treatment group had a loss of 5.5% of initial weight lost and 21.8% of excess weight lost. One might suggest that to improve weight loss outcomes, stricter selection criteria be introduced by those involved in the bariatric surgery decision making process. Considering pre-operative motivation predicts weight loss after gastric bypass (Averbukh, Heshka, El-Shoreya, Flancbaum, Geliebter, & Kamel, 2003), selection criteria may include dietary guidelines, mandatory weight loss, exercise or psychological care. Findings from an Italian study by Pessina, Andreoli and Vassallo (2001) that involved 50 patients who had undergone bariatric surgery with significant weight loss showed that accurate education pre-surgery and good psychological support post-surgery, increases the likelihood of patient compliance and thereby increases the success rate. Prior to the surgery, Stone et al., (2011) and Kominiarek (2011) advocate a multidisciplinary team approach including the bariatric

surgeon, bariatric dietician, bariatric anaesthetist, endocrinologist, psychologist and bariatric nurse specialist. The potential patient should undergo a rigorous preoperative assessment and be provided with a full explanation about the different types of bariatric procedures. According to Hammoud, Gibson, Peterson, Meikle and Carrell (2008), a person who is well informed about this surgery will have better weight loss outcomes.

Livhits et al., (2012) conducted a systematic review of longitudinal studies on weight loss following bariatric surgery and found that post-operative weight was most successful if patients were able to meet the demands for preoperative mandatory weight loss. Furthermore, a study by Pessina et al. (2001), involved 50 patients who underwent a preoperative psychological assessment followed by bariatric surgery. Patients were interviewed at one, three and six months' post-surgery and the findings indicated that binge eating behaviours correlated with a likelihood of postoperative weight loss failure. In consideration of bariatric surgery, there is a need to balance the risk of surgical and anaesthetic complications, co-morbidities of obesity, financial costs, the 10-15% chance of no resulting weight loss (Aldouri & Dexter, 2009) and the 12 to 20% follow-up surgery rate (Ide et al., 2008). Nurses involved in caring for bariatric surgery patients should be aware of this delicate balance between the benefits and potential complications (risks). The attempt to balance the risks and benefits may become a dilemma for many nurses which give rise to ethical concerns.

2.12 Ethical concerns

Across many healthcare areas it is not unusual for a nurse to be confronted with an ethical issue/concern associated with caring for patients. Examples of the benefit versus burden debate have occurred in areas such as: reproductive technologies (Scott, 2004), abortion, end of life care, chronic pain, organ transplants, persistent vegetative states, electro-convulsive therapy, bariatric surgery and futile care as discussed by Camden (2009). Documented healthcare areas which present ethical concern for health care providers also include the ICU (McClendon & Buckner, 2007). Such ethical issues raised include: Do Not Resuscitate (DNR) orders, unnecessary tests, the patients' families wishing for aggressive treatment in critically ill patients, long term ventilation, high acuity patients, technological advances, competency levels of co-workers, burnout, transferring patients and moral distress; whereby institutional constraints violate personal beliefs and values about what is right or wrong. Findings from a study by Johnstone, Da Costa and Turale (2004) involving 398 Australian RNs and Enrolled

Nurses (ENs), identified the most frequent ethical concerns reported were: protecting patients' rights and human dignity, providing care that might involve possible risk to their own health, informed consent, staffing patterns and limited patient access to nursing care. One may propose that all these concerns are pertinent to bariatric surgery nursing care. Furthermore, ethical issues specific to bariatric surgery have been identified in research by Saarni et al. (2011) as value related issues. These issues include ethical principles of autonomy, beneficence, non-maleficence, justice, fidelity, veracity and confidentiality as well as ethical concepts of moral indifference, moral uncertainty and moral distress. Such principles and concepts are all ethically relevant and should be considered when assessing the possible consequences of bariatric surgery.

Camden (2009/2010) published four articles which evolved from her PhD study focusing on the ethical concerns of RNs working in the arena of bariatric surgery. Camden (2009) describes ethical concerns for the bariatric nurse, including rights, responsibilities, access to care, paternalism, virtue, trust and consent. Part one "The Georgetown Mantra – a framework for debate" (Camden, 2009) is based on the ethical principles of autonomy, beneficence, non-maleficence and justice, which are regarded as the basis of ethical principles in the healthcare setting. Part two "Paternalism – recognizing the tension between beneficence and autonomy" (Camden, 2009) describes the current shift in healthcare towards increased patient autonomy and decision making, away from a historically paternalistic base in which health care professionals made decisions. Highlighted in part two was the importance of both bariatric surgery and ethics education for RNs to promote patient advocacy and facilitate nurse-patient communication and education in this area.

Even though RNs are faced with ethical concerns routinely, perhaps these concerns are more clearly evident when a relatively new treatment such as bariatric surgery is introduced without adequate preparation of the patients or nurses. As previously described, in the US, according to the CMBRM (2005) and Ide et al. (2008), knowledge deficits in relation to bariatric surgery were reported to be the primary concern in a review of caregivers associated with 16 post bariatric surgery deaths in Massachusetts between 2003-2004. In Australia, bariatric surgery is the fastest growing area of surgical practice (O'Brien et al., 2005), thus, it is expected that increasing numbers of RNs will have to meet the challenges of caring for these patients. Considering the range of attitudes of nurses toward the obese person (James, 2005) and

the potential gaps in bariatric specific knowledge and education it would be reasonable to expect a range of opinions and ethical concerns by health care professionals.

Australian RNs may hold both positive and negative views of the procedure or possess a degree of indifference; however, what is of relevance here is what perspectives, either negative or positive, may cause ethical concern. Concern may be implicitly expressed as; moral uncertainty; which occurs when one senses there is a moral problem, and/or moral distress; as previously described. A systematic review of five studies by Redman and Fry (2000) in relation to nurses' ethical conflicts found that moral distress is documented to result in a rate of 30-50% of nurse attrition from the unit or profession. An intervention such as bariatric surgery may lead the nurse, as moral agent, to perceive the surgery from the perspective of the 'benefit to burden debate' as described previously by Camden (2009/2010). The careful consideration of pros versus cons of bariatric surgery may predispose nurses to moral uncertainty and moral distress. Considering the current shortages of nurses, rising obesity numbers and growth in the bariatric surgery industry, this situation should be avoided.

2.13 Moral uncertainty and moral distress

Individuals construct disease and illness differently, thus the attitudes of one individual can be quite different from another when confronted with the same disease or illness. Often this depends on the social and psychological determinants of the person and exposure to the condition. Health care practitioners also perceive clinical situations differently. Some individuals may be confident in the overall benefit of certain situations and treatments, in contrast, in the same situation others may feel unease and perhaps distress. Moral uncertainty occurs when nurses perceive that "something is not quite right", or when they feel uncomfortable with a situation but cannot establish what the problem is (Burkhardt & Nathaniel, 2008). Internal and external constraints contribute to moral distress, for example, when a health professional is perceived to be fully responsible but is then constrained from acting in a morally appropriate manner (Freegard, 2007). When a person experiences both moral uncertainty and moral distress, then conflicts or concerns may arise due to their held values, religion, upbringing, culture or personal experiences.

McClendon and Buckner (2007) described instances of moral distress caused by involvement in perceived futile care experienced by critical care nurses in the ICU which led to emotional exhaustion and burnout. Feeling that they are doing the "right

thing” is important to nurses, and situations of moral distress may make them question their work and subsequently may undermine their care. Ideally, the therapeutic relationship between patient and nurse should be built on trust, advocacy and confidence in the beneficence of the care, but this position may be compromised if individuals are placed in situations of moral uncertainty and moral distress. According to Camden (2010), in the US, the benefit versus burden debate of bariatric surgery prompts moral uncertainty and moral distress for nurses. It might be asked if this is also true of Australian RNs.

Considering an obese person is at increased risk of significant and disabling co-morbidities, bariatric surgery may become a viable option to avoid a premature death, regardless of the array of complications. A search of the research literature in relation to nurses caring for bariatric patients did not reveal substantive Australian studies exploring the ethical concerns of nurses or the benefit to burden debate appropriate to bariatric surgery. This study will address this omission.

2.14 Ethical concerns relevant to bariatric surgery

2.14.1 Benefit versus burden

Bariatric surgery generates considerable discussion concerning the benefit versus burden debate due to the range and prevalence of advantages and disadvantages in relation to the surgery itself, the financial cost of the surgery and the potential negative or positive outcomes for the patient. These factors therefore could raise ethical concern for nurses who care for these patients. Camden’s (2010) study, “Balancing benefit to burden” described the ethical issue of futility, whereby the burden far outweighs the benefit from the treatment. Camden described RN’s perceived breach in beneficence when providing treatments which perceived, would not improve the patients’ health status. This ethical issue is proposed to have arisen in bariatric surgery for several reasons. Firstly, the increased use of technology, which has increased the number of diagnostic and therapeutic options available to patients. Secondly, the increase in technological options and access to these options has generated related costs. Thirdly, there had been a shift from paternalistic health care decision-making to one based on respect for personal autonomy.

Bariatric surgery is not the only area of health care that has been considered within the benefit to burden debate. Shalak, Almulhim, Ghantous and Yazbeck (2009) investigated all laparoscopic appendectomies (LA) carried out between 2004 to 2007

involving 151 children. Although a LA means a shorter hospital stay and less wound infections, some studies have showed that LA is associated with a higher rate of intra-abdominal infections. Thus, the benefit versus burden debate is not confined to bariatric surgery; many healthcare areas raise the question of whether clinicians should offer interventions that could be deemed futile (the burden of risks and/or weight loss failure outweighs potential benefits) and whether patients are entitled to expect them.

2.14.2 The Obesity/Poverty connection “Povbesity”

From a British perspective, Delpeuch et al., (2009) described obesity as an illness of deprivation, whereby poor households are stocking up on sugar, starch, oil and other processed foods which provide high energy, low cost meals. The WHO (2011) has inextricably linked obesity and poverty and in 2009 revealed that 82% of people with cardiovascular disease and 80% of people with diabetes are low-income earners. This obesity-poverty “Povbesity” connection is a significant factor which perhaps is given far less priority and concern than it deserves in the fight against obesity. Individuals within the lower socio economic groups may accept inexpensive fast food as the only viable option, therefore it could be postulated this group could be deemed “too poor to be thin”. The unlikelihood the obese, low socio-economic status person will be able to afford a variety of holistic weight loss options, further compounds the “Povbesity” plight. Delpeuch et al., (2009) stated that once past a certain level of economic development, it is the poorest and least educated who are more inclined to become obese, compared to higher socio-economic groups.

2.14.3 Inequity of access to bariatric surgery

Australia has a public health system of universal coverage for primary care and hospital care. Australia also has a private hospital system, for which individuals can purchase health insurance policies to access this system. About half the Australian population has private health insurance. In contrast, in the US, the predominant funding is from employer provided health insurance policies. Medicare and Medicaid schemes provide a partial safety net but a significant percentage of the population remain without cover. Therefore, the reader should be aware of these differences when reviewing the literature.

The vulnerability of the lower socio-economic population to obesity is attributed to being within a low-income bracket, having poor education outcomes and other

lifestyle factors. In addition, it is this group which is less likely to have access to bariatric surgery (Delpuech et al., 2009). Livingston and Clifford (2004) identified that in the US many of the poor and/or African American population that would benefit most from bariatric surgery did not have access to the procedure because of the financial costs. Carbonell et al., (2005) identified similar results by accessing the US National Inpatient Sample database. This search discovered that only 5% of patients who had undergone gastric bypass had a median income of below \$24,999. Again this indicated that it is individuals of low socio-economic status, who are more likely to be obese (Delpuech et al., 2009; WHO, 2011), do not have equitable access to bariatric surgery. Furthermore, an Australian study by Talbot et al., (2005) and AIHW (2003) found that between 2002-2003 there were only 466 bariatric procedures performed in the public sector, compared to 3574 in the private sector. Nurses are confronted with this obvious documented inequity (Kitto et al., 2007; Saarni et al., 2011), when presented with the statistic that 80 % of Australian overweight and obese people access bariatric surgery services through the private health care system (Smith et al., 2008).

The Australian Medicare program funds 75% of the scheduled fee for private patients in private hospitals and the individual's private health insurance pays the remaining 25% for the lap band procedure and hospital fees (Talbot et al., 2005). Out of pocket costs are met by the private patient but the amount is dependent upon how much the surgeon and hospital charge in excess of the scheduled fee. In the public health care sector, provision of this elective procedure is subject to the usual resource allocation constraints of state government funded public health system. Therefore in Australia, as in the US, the structure of bariatric surgery funding has evolved so that those who most need the option of bariatric surgery have the least access.

2.14.4 Psychological concerns

There appears to be an overall lack of attention paid to psychological causes and the treatment elements of obesity by many health care professionals. O'Brien (2010, p.1363) describes LGB as "unsuitable for those who are mentally defective or otherwise unable to engage in the 'partnership' needed for optimal outcomes". Considering 60% of candidates for bariatric surgery have psychiatric disorders (Rosik, 2005; Sarwer, Cohn & Gibbons, 2004), the above statement gives evidence of how the psychological treatment components of obesity in bariatric surgery are sometimes disregarded. Devlin, Walsh, Spitzer and Hasin (1992) discussed possible psychological

characteristics associated with obesity such as: impaired childhood body image, reduced acceptance to major colleges, unemployment, discrimination, binge eating disorder, personality disorders and perfectionism. Furthermore, Fassino, Leombruni, Piero, Abbate-Daga and Rovera (2003) involving 103 obese participants and 93 healthy control subjects noted personality disorders and perfectionism as psychological characteristics associated with obesity. While found many obese people were subject to childhood maltreatment (Grilo et al., 2005) and about one-third were identified as victims of sexual child abuse according to Hensrud and Klein (2006) and Padwal and Sharma (2009). A study by Edman, Yates, Aruguete and Draeger (2011) found that obese women were found to be at higher risk for pathological eating, as they reported increased levels of drive for thinness and feelings of self-loathing. Such characteristics could produce unease on the health care staff when surgical intervention is selected as a means of treatment. Findings from the aforementioned study may add significant value to the use of pre bariatric surgery screening to identify binge eating behaviours and thus likelihood of weight loss failure (Pessina et al., 2001).

Behavioural change is an essential component of any response to obesity; however, this is a complex process for individuals, extending beyond education and the provision of information. An Australian study of 208 patients (177 women and 31 men) found that men were more likely to be motivated to choose bariatric surgery for medical reasons. In contrast, women listed appearance and/or embarrassment as the major motivating factor for surgery (Kitto et al., 2007). A phenomenological study by LePage (2010) found that male and female participants who had undergone bariatric surgery described a strong sense of physical and emotional emptiness post-surgery. These feelings were combined with a realisation of how a reliance on food can calm nerves, ease pain and soothe loneliness. Following the surgery some participants had replaced food with another form of addiction such as bulimia, drug abuse, tattooing and shopping, in an attempt to replace what they perceived they had lost. Furthermore, participants described the lack of transformation of their self-image, for example, one participant post operatively professed feeling she was “a fat girl in a thin girl’s shell” (LePage, 2010, p. 62).

A study by Mathus-Vliegen et al., (2004) undertaken in the Netherlands compared the health related quality of life of 98 subjects of normal weight and 49 obese people (of the same sex, age and educational background) pre, and one year post gastric banding surgery. Findings showed that post operatively the obese participants’ demonstrated

small to moderate improvements in depression, self-regard and social activities, while the percentage of those with severe depression decreased from 51% to 39%. Further improvements in general wellbeing and days taken for sick leave were also a factor. However, the obese group tended to revert to their original preoperative psychological status at around two years post operatively. These results demonstrate that continuing psychological support is essential to determine the factors that cause a person to become obese and how they could be supported, physically and psychologically, following bariatric surgery or a weight loss program.

2.14.5 Obesity prejudice and stigma

Obesity is viewed as “the last socially acceptable form of prejudice” (Murray, 2003, p.990). Discrimination and stigmatisation of the obese is a real concern for those in a position to provide care for this growing section of society. Such stigmatisation is now comparable in prevalence to racial discrimination in the US (Puhl, Andreyeva & Brownell, 2008). As Australian society is not isolated from global trends and since bariatric surgery is increasing in Australia, healthcare professionals must be aware of the potential for discrimination. This issue may be further complicated in the clinical arena of bariatric surgery by the evident links between obesity and poverty (WHO, 2011). Previous studies into obesity stigma have found a range of examples of discrimination. Puhl (2006) reported studies which have shown that 63% of nurses agreed with the statement that obesity can be prevented by self-control, 48% felt uncomfortable caring for an obese patient and 31% would prefer not to care for obese patients. RNs had significantly higher levels of fat phobia and more negative attitudes than did student nurses (Poon & Tarrant, 2009). Findings from a UK based study by Brown and Thompson (2007), determined that a nurse of slim build felt uncomfortable discussing obesity with patients due to their perceived inability to empathise or truly understand the experience of the patient.

The reluctance of nurses to care for the bariatric patient (James, 2005) may relate to the perceived manual handling risks on a daily basis. In the bariatric surgery operating theatre, the risk of injury to nursing staff during the transfer or care of the anaesthetised or post anaesthetic patient is substantial. As most bariatric surgery is performed in the private hospital system, staff numbers are usually kept to a minimum. In addition, the risk of injury may be further exacerbated by the lack of appropriate bariatric equipment such as hover mats, slide sheets, slide boards, arm boards and bed

extensions. Furthermore, the reluctance to care expressed by the nurses may relate to a deficit in knowledge about the obesity trend, bariatric surgery and how to care for these patients. An Australian study by Johnstone et al., (2004) involved the administration of the Ethical Issues Scale to 398 nurses. Results showed that only 8.3% of nurses surveyed believed that their place of employment provided adequate resources to help them deal with ethical and human rights issues in nursing practice. Thus, it is proposed here that deficiency in ethical support may also be of concern for nurses who care for bariatric surgery patients in particular, increasing the potential for moral uncertainty and moral distress.

2.14.6 Informed consent process

“Ethically valid consent is a process of shared decision making based upon mutual respect and participation, not a ritual to be equated with reciting the contents of a form that details the risks of the particular treatments” (President’s Commission, 1983 as cited in Moss, 2001, p.2). This description of consent acts as a reminder the process is not one of routine statements of risks, but of mutual understanding. During the consent process, the patient is informed of potential surgical and anaesthetic complications that may occur intraoperatively or postoperatively and the finality of some of the surgeries. Health care professionals such as nurses should be involved in this process so they too are informed of the information provided to the patients and have an understanding of how the patient has constructed their understanding and assimilation of the medical jargon. The importance of understanding what bariatric surgery involves is supported by the findings of an American study by Madan, Tichansky and Taddeucci (2007). 70 patients who had undergone bariatric surgery were asked to write down the complications they could recall. Findings showed that many of the patients forgot the more serious complications which as Madan et al., observe, could have medical implications and lead to possible malpractice suits.

The autonomy of the patient and healthcare professional are important aspects of healthcare ethics, becoming increasingly relevant as medical paternalism diminishes. Consequently, autonomy requires both competence and adequate disclosure of information (Saarni et al., 2011) and confirmation of understanding of the information. Poor understanding of information by the patient further reduces competence and therefore, autonomy. This situation therefore raises further ethical concern in relation to the competence of the patient to make informed decisions and whether patients are

emotionally or psychologically vulnerable. Vulnerability may place patients in a situation whereby bariatric surgery may be presented in an overly favourable light while non-surgical interventions such as diet, exercise and a psychological assessment may be disregarded. Full disclosure (in layman's terms if necessary) of benefits, risks and alternatives is a necessary step in the informed consent process. However, according to Rowan and Zinaich (2003) the focus of the informed consent process is directed on the possible risks rather than the therapeutic options.

2.15 Theoretical framework for study

Nursing is fundamentally concerned with the promotion and protection of wellbeing of patients. Nurses are educated to consider moral issues underlying their profession, as well as the clinical expertise required for patient care. To direct ethical/moral behaviour, nurses working in the healthcare industry within Australia are guided by the Code of Ethics for Nurses and the Code of Professional Conduct for Nurses (Australian Nursing and Midwifery Council [ANMC], 2008). These codes outline the nursing profession's commitment to respecting, promoting, protecting and upholding the fundamental rights of both the people who are the recipients and those who are providers of nursing and health care. The Code of Ethics for Nurses in Australia is designed to guide ethical decision-making and practice, through the application of ethical principles, using the practitioner as moral agent (Beauchamp & Childress, 2008); hence this is both a practical and conceptual framework at the heart of health care delivery.

Ethical principles are necessary not only to decide which actions are morally necessary or morally outlawed, but also those actions which are morally commendable, morally undesirable or neutral (Gillon, 2003). Fundamental to ethics and healthcare are the principles of beneficence, nonmaleficence, autonomy, justice, veracity, fidelity and confidentiality (Burkhardt & Nathaniel, 2008). Munson (2008) describes the importance of beneficence as a duty required by, and inherent in, the role not only of physicians but also of all health professionals. Beneficence can be defined as an action designed to positively benefit the well-being of others and which imposes a moral obligation to provide clients with net benefit and minimal harm (Freegard, 2007).

According to Freegard (2007), the ethical principle of non-maleficence or "do no harm" can be applied to the notion that a patient who is treated by a health practitioner should not be harmed or compromised as a result of the treatment. Many patients are at

least temporarily compromised when receiving treatment (for example, intravenous therapy); however harm/risk should not outweigh the benefit of the treatment. Ethical justification for harm is present in the “Principle of Double Effect” (St Thomas Aquinas, as cited in Foster, Herring, Melham & Hope, 2011), whereby intent is considered and the notion of prima facie applied to the principles of beneficence, confidentiality and veracity (Rowan & Zinaich, 2003). Thus, these principles may be overridden by a stronger duty. In the case of bariatric surgery, the duty of non-maleficence (which one may consider is compromised by harm through surgical and anaesthetic complications) is overridden by beneficence (reversal of obesity co-morbidities through weight loss). Informed consent is an ethical process that incorporates the ethical principles of veracity (truth telling) and fidelity (promise keeping). The principle of justice refers to the access to treatment and distribution of healthcare resources, regardless of need, relevant to the access and availability to the surgery for all that require it.

An extensive search of the literature did not reveal any studies undertaken in Australia that have specifically explored ethical concerns in bariatric surgery nursing care. Studies conducted overseas have however, focused on ethical issues related to obesity and bariatric surgery in the UK and the US (Camden, 2009/2010), Norway (Hofmann, 2010) and Finland (Saarni et al., 2011). Ethical concerns related to the financial impact of these procedures on the health care system (O’Leary, 2010), the co-morbidities associated with obesity (Aldouri & Dexter, 2009), the inequality of access to bariatric surgery (public versus private access) (Kitto et al., 2007) and the possible associated anaesthetic and surgical complications (Ide et al., 2008). It is proposed here this research study will help address the paucity of studies in Australia and will explore the experience and ethical concerns of a group of nurses involved in the care of bariatric surgery patients in Perth, WA. Given the upward trend in obesity and bariatric surgery within Australia and the fact that 74% of Australian nurses believed they had a need for more education on ethical issues (Johnstone et al., 2004), this present study is both timely and necessary.

CHAPTER 3

METHODOLOGY

This chapter presents a description of the study design, the research questions to be addressed, and the methodology used to collect and analyse the data. Included also is a description of the sample group and procedures.

3.0 Aim of study

The aim of this study was to explore the ethical/moral concerns that perioperative, anaesthetic and recovery room RNs may have in relation to caring for patients during and after bariatric surgery. Concern may be present due to the benefit versus burden debate (Camden, 2009/2010), a common phenomenon in healthcare issues such as bariatric surgery where pros and cons of treatment options both possess significant weight. Other ethical concerns may be based around issues related to the education of RNs about bariatric surgery and caring for these patients, equity of access, financial costs, the obesity-poverty association, the informed consent process, obesity stigma, long term implications of bariatric surgery and the psychological welfare of bariatric patients who are surgically treated for what could be seen as an eating disorder. The study's specific aims were to investigate the following questions:

1. What ethical concerns may RNs have in relation to bariatric surgery and bariatric surgery patients?
2. From the perspective of the RNs, what are the perceived benefits and the perceived risks (burden) of bariatric surgery? Are the risks ethically justified by possible benefits?
3. If RNs do experience moral uncertainty and/or moral distress, how do they resolve/not resolve this concern?

3.1 Research design

The study involved an exploratory (non-experimental) qualitative approach using semi-structured interviews. An exploratory study is conducted when little is known about the phenomenon under investigation, or when a problem has not been clearly defined (Polit, Beck & Hungler, 2010). In relation to the focus of the present study, there is little known about the ethical concerns of RNs who are involved with bariatric surgery and bariatric patients in an Australian context.

The focus of qualitative research is to determine how the person makes sense of their experiences in the world and how meaning is attached to those experiences. Essentially, the aim of this study is to capture a person's beliefs, feelings, perceptions, views and behaviors' and the meaning and interpretation given to these aspects. In essence, it aims to enrich understanding of human experiences (Polit et al., 2010). According to Borbasi, Jackson and Langford (2008) this type of approach goes beyond describing concepts to seek and identify key variables and examine the relationships between factors. Insight can be gained in regard to developing an approach to a problem and from this the researcher can establish priorities for further investigation.

As the term exploratory study implies, this approach provides the groundwork for future study. Exploration of a new phenomenon, such as the focus of this present study, may assist to provide a better understanding of the issue and from this determine the feasibility of a more extensive study.

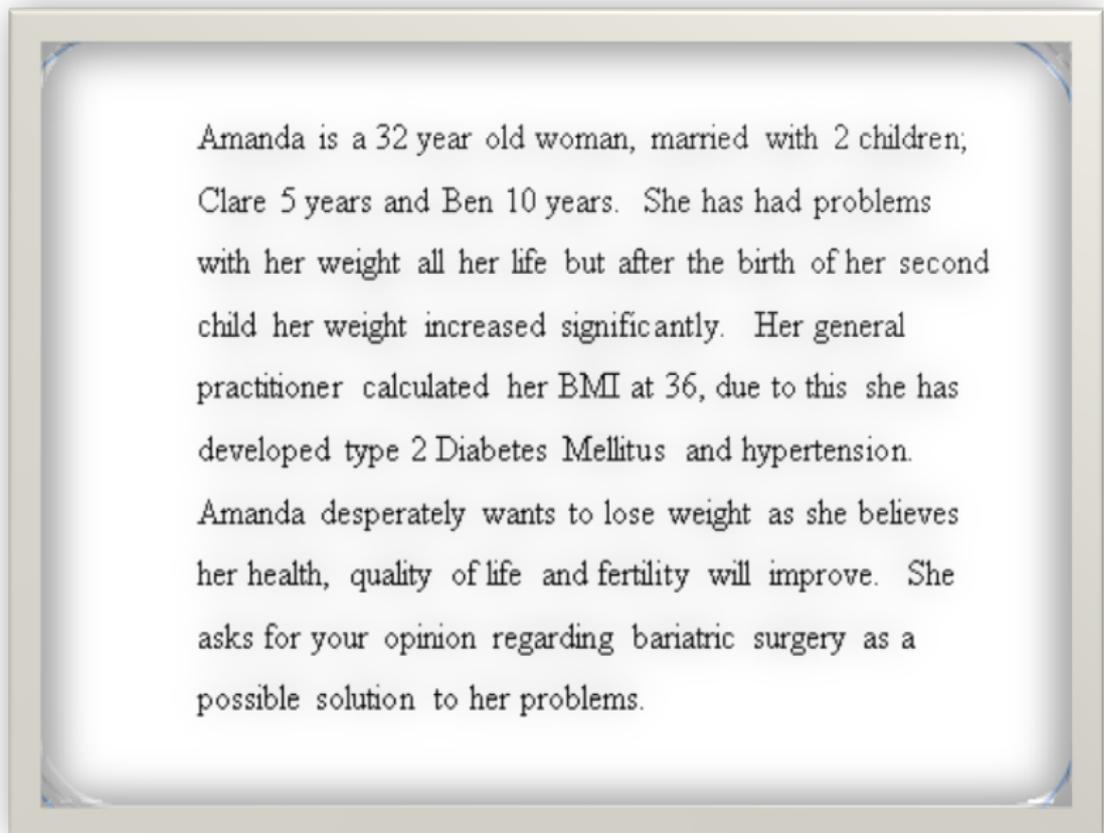
An exploratory approach is aligned to qualitative data; therefore, one on one interviews were deemed appropriate. According to Roberts and Taylor (2002), a semi-structured interview, which uses written questions as a guide, can achieve some consistency of data. The interview process involved providing interviewees with a vignette as a means to elicit information about their experience, knowledge and opinions related to bariatric surgery and caring for these patients (Polit et al., 2010). A description of a situation (in this case involving Amanda) was fictitious but structured in such a way that it would elicit information about the participants' perception, concerns and knowledge about obesity and bariatric surgery. The involvement of a vignette in research has been used in previous studies in relation to moral reasoning. Furthermore, the use of a vignette as a means to collect data is a common practice in nursing research when sensitive ethical issues related to care are investigated (Milligan & Woodley, 2009). According to Polit et al., (2010) vignettes are used in research to assist in clarifying peoples' judgments and to provide a less personal and therefore less

threatening way of exploring sensitive topics such as bariatric surgery. Interviewees were expected to draw on their knowledge and views about bariatric surgery. This approach allowed the compilation and analysis of information related to real life experiences associated with nursing bariatric patients (Polit et al., 2010).

3.2 The vignette

The vignette used in this study presented a hypothetical scenario involving a fictitious person “Amanda” who was obese and had obesity co-morbidities (see Figure 3.1). The participants were asked to read the vignette and then respond to questions related to it.

Figure 3.1 Vignette related to obesity and bariatric surgery



In order to check the reliance of the vignette to the participants’ actual experience, the participants were specifically asked whether the vignette was an accurate representation of the types of patients the participants had cared for. The following question was asked of participants;

“Is this hypothetical situation about Amanda, similar or different to the types of bariatric surgery cases that you encounter in hospital?”

Eight of nine participants used the word ‘similar’ to describe the relationship between the vignette and bariatric surgery patients they had encountered in the clinical setting. From this response, the researcher determined the vignette did reflect a situation the RNs would encounter; therefore, the participants could provide an objective view when responding to the interview questions.

Interview questions, generated from a review of the literature which related to bariatric surgery and care for the bariatric patient, were also based on perceived ethical/moral concerns towards bariatric surgery, perceived benefits and risks of bariatric surgery and possible related moral indifference, moral uncertainty or moral distress. Table 3.2 shows how the interview questions aligned with the research questions.

Table 3.2 The relationship between research questions and interview questions

| Question 1 | Question 2 | Question 3 |
|---|---|--|
| <p>What ethical concerns may RNs have in relation to bariatric surgery</p> | <p>From the perspective of the RNs, what are the perceived benefits and the perceived risks of bariatric surgery? Are the risks ethically justified by possible benefits?</p> | <p>If RNs do experience moral uncertainty and/or moral distress, how do they resolve/not resolve this distress?</p> |
| <p>What ethical concerns may arise in treating Amanda with bariatric surgery?</p> <p>Do you have ethical concerns for bariatric surgery in general?</p> <p>How do you feel about caring for bariatric surgery patients such as Amanda?</p> <p>Could you describe the possible benefits for Amanda to have bariatric surgery?</p> <p>In relation to the surgery, could you outline the possible negative aspects of this procedure for Amanda?</p> <p>Could you make any recommendations in relation to your current education/knowledge of bariatric surgery that would be useful to include in an educational package for current and future RN's?</p> | <p>Could you describe the possible benefits for Amanda to have bariatric surgery?</p> <p>In relation to the surgery, could you outline the possible negative aspects of this procedure for Amanda?</p> <p>What might be the positive and negative impacts of this intervention on Amanda's relationships with her children and husband?</p> <p>In relation to bariatric surgery, would there be any positive or negative impacts on the hospital service and the healthcare system?</p> | <p>What ethical concerns may arise in treating Amanda with bariatric surgery?</p> <p>Do you have ethical concerns for bariatric surgery in general?</p> <p>Could you describe the possible benefits for Amanda to have bariatric surgery?</p> <p>In relation to the surgery, could you outline the possible negative aspects of this procedure for Amanda?</p> <p>In relation to bariatric surgery, would there be any positive or negative impacts on the hospital service and the healthcare system?</p> |

3.3 Recruitment of sample group

A purposive sample of nine participants was achieved. Participants were all experienced anaesthetic and/or recovery room RNs who are involved in all specialties of surgery and anaesthesia, including bariatric surgery. When recruited for this study, they were currently registered with a nursing agency in Perth, WA. This nursing agency allocated the participants to both private and public hospitals offering bariatric surgery in the metropolitan area. The one on one interview's took approximately 45 minutes and were audio recorded and later transcribed verbatim by the researcher.

Access to potential participants was through a nursing agency. Recruitment of potential volunteers was via a flyer (see Appendix 1) which provided a brief outline of the study and asked for volunteers to contact the researcher. The nursing agency consented to mail the flyer to RNs listed with them whose expertise was working within anaesthetic or recovery departments in hospitals within the metropolitan area. A stamped return envelope was included with the flyer. Due to the sensitive topic of the study and to ensure anonymity of the participants from their peer group, it was reasoned that a flyer, sent directly to individual volunteers through the nursing agency, was the best option to safeguard confidentiality. To further maintain confidentiality each envelope was coded, for example 01, 02 03 and so on. This code was aligned with a participant on an address list, which remained solely in the possession of the nursing agency manager and was stored in a secure locked drawer in the manager's desk. The researcher did not have access to this list.

If an individual consented to an interview, he/she was asked to tick the consent box and return the flyer to the researcher in the provided stamped, return addressed envelope. Only when a prospective participant responded to the flyer did the researcher contact the volunteer. In total, 35 flyers were posted to prospective participants, of which 10 were returned, giving a return rate of 28.6%. This low response rate may have an impact on the results.

3.4 The interview process

On receipt of the returned flyer the researcher contacted the volunteer to arrange a mutually agreeable time and place to conduct the interview. Of the nine participants interviewed, seven preferred the interview take place at their home while the other two volunteers chose to attend alternative venues. Prior to the interview the volunteers were

asked to read a plain English statement (Appendix 2) which outlined the study. At this time the participants were given the opportunity for clarification, for example, the conduct of the study and the provision of a report of results for participants following conclusion of the study. Prior to beginning the interview the volunteers were asked to sign a consent form (Appendix 3). Permission was sought from each participant to audiotape the interview which was later transcribed verbatim by the researcher. The interview process ranged from 40 to 50 minutes.

On completion of the seventh interview the researcher deemed data saturation had been reached. A further two interviews were conducted to fully determine that no new data was forthcoming. In qualitative research, sample size is generally determined by how the data unfolds. When data saturation is reached (that is further interviews would not reveal any new information) the researcher ceases the interviews (Polit et al., 2010). This occurred on completion of interview nine.

3.5 Analysis of the interview data

A thematic analysis approach was undertaken to identify categories, themes and patterns which emerged from the data, as well as commonalities across participants in relation to the research questions (Polit et al., 2010). Data collected were transcribed and themed according to the research questions using ethical principles as a framework.

The following coding system (see Table 3.3) was designed to reflect themes and patterns which emerged from the data. For example, nurses' perception/views (positive and negative) about bariatric surgery, the patients undertaking the surgery, the demands of caring for the bariatric patient, moral/ethical concerns related to the surgery and patient care and education of current and future nurses. Data analysis was attempted through application of the ethical principles. Such principles are considered vital to decision making processes, healthcare provision and the code of ethics for nurses. Some interview data were related to various ethical principles, whilst other concerns of the RNs may be considered ethically irrelevant. Figure 3.3 shows the seven ethical principles: justice, beneficence, non-maleficence, fidelity, confidentiality, veracity and autonomy in relation to the burden to benefit debate and the other ethical concerns of the nurses involved in the study. Shown here is how the seven principles explored in this study were used to analyse and code the data in relation to the ethical concerns expressed by the participants. Other themes, which emerged from the data were also identified, coded and aligned to the relevant research question. These themes included;

perceived positive effects of bariatric surgery on Amanda’s life and perceived negative effects of bariatric surgery on Amanda’s family.

Figure 3.3 Ethical principles comprising the analytical framework

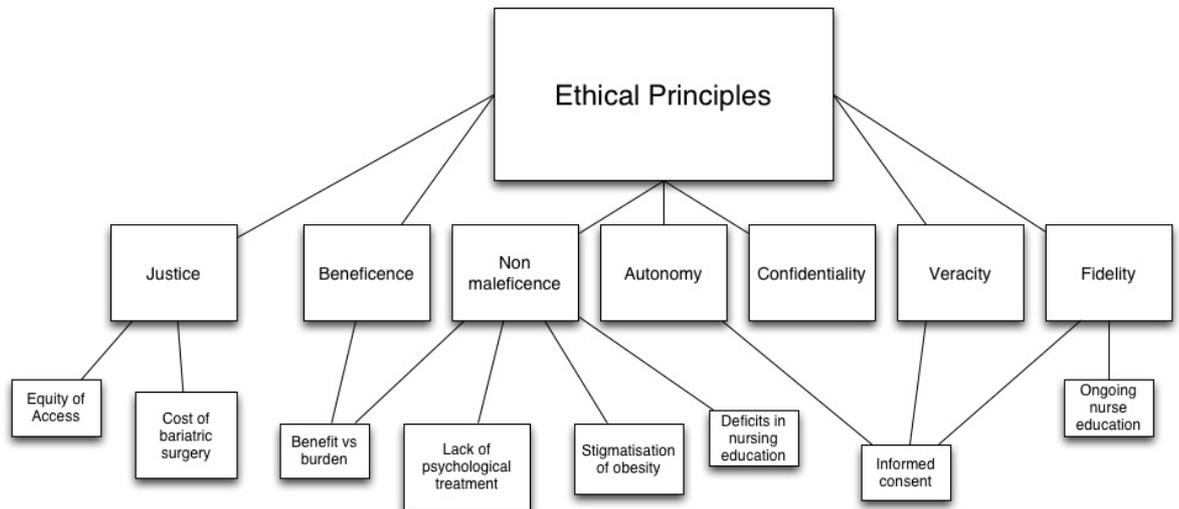
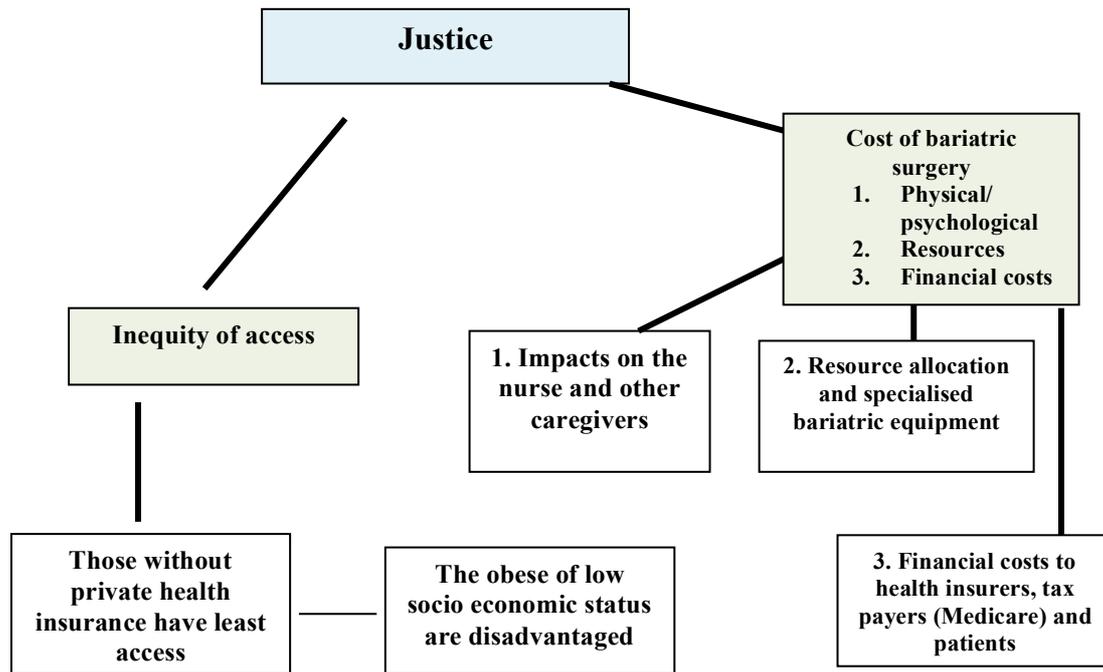


Figure 3.4 demonstrates how the coding of the principle of justice was used to link the participants’ perceived concerns about injustice in relation to bariatric surgery access. Two strands were identified: firstly, the issue of equity of access, as not all obese people have access to the surgery as they do not have privately funded health insurance and the majority of bariatric surgery is performed in the private sector. Secondly, the cost of bariatric surgery when related to physical cost (impacts on the nurse caring for these patients such as burnout and manual handling risks), which becomes a financial cost to the health care system (Medicare funding, private health insurance rebates, cost of bariatric surgical instruments, larger operating tables) and resource allocation (ICU beds, theatre lists, health professional specialisation).

Figure 3.4 Coding system relating to the ethical principle of justice



The reliability of the coding was achieved in the following ways:

- The researcher reviewed and cross-checked coding to ensure that duplication and miscoding had not occurred.
- Supervisors also reviewed the data analysis and interpretation of themes
- Codes which were difficult to categorise were discussed with supervisors.

3.6 Trustworthiness

In quantitative research trustworthiness is determined through the positivistic criteria of internal and external validity, reliability and validity (Farrelly, 2013; Polit et al., 2010; Shenton, 2004). Lincoln and Guba (1985) proposed that credibility, dependability, confirmability and transferability could be used to establish the trustworthiness of qualitative research data.

3.7 Credibility

The researcher undertakes to ensure the truth of the data by firstly, undertaking the study in such a way that the believability is enhanced, and secondly, the researcher takes steps to demonstrate credibility. Polit et al., (2010) outline the activities recommended by Lincoln and Guba (1985) to ensure credible data and interpretation of the data. These six strategies are: prolonged engagement and persistent observation, triangulation, peer briefing and support, member checking, negative case analysis and researcher credibility. In this study three strategies were used, researcher credibility, prolonged engagement and peer briefing and support.

3.7.1 Researcher credibility

This is an important aspect of the process as the researcher is pivotal to the data collection and how the data are analysed. In the present study the researcher has the credentials to facilitate this study as she is academically sound and has extensive expertise in the area of focus. Within the research report this is made known to provide full disclosure. The researcher has worked as an anaesthetic RN in the area of bariatric surgery for eight years and has tutored undergraduate nursing students in nursing ethics.

3.7.2 Prolonged engagement

A nursing agency was used as a conduit to invite volunteers to participate in the study. Written consent to participate was given by all the participants and they were informed that they could stop interview at any time, or withdraw from the study without prejudice. Prior to starting the interview process each participant was provided with a plain English statement that outlined the study. Participants were informed that they could ask any questions before starting the interview and on conclusion of the interview. It was emphasised that confidentiality would be maintained throughout. It was intended that from this level of openness the participant would have confidence in, and trust, the process the researcher had planned. Feeling at ease, the participant would be more likely to provide a full account of their clinical experience of bariatric surgery and caring for the bariatric patient.

3.7.3 Peer debriefing

This is a technique to establish credibility in qualitative research (Polit et al., 2010). In this instance the researcher had regular meetings with the supervisors for

support, for feedback and the development of ideas and to discuss recognised bias. All stages of the research planning, sampling, data collection and analysis were carried out by the student in collaboration with supervisors. Student and supervisor contact was in person, by email and telephone.

3.8 Dependability

Dependability refers to the stability of the data over time and enables replication of the study. The researcher contends that if the study were repeated within the same context, using the same methods and the same participants the results would be similar (Polit et al., 2010).

3.9 Confirmability

This refers to the objectivity of the data and transferability enables comparison to other groups or contexts and is similar to the concept of generalisability (quantitative research) (Polit et al., 2010; Shenton, 2004). In relation to this present study the researcher affirms the findings from the study are the experiences of the participants not of the researcher.

3.10 Transferability

Transferability describes the extent to which the study findings can be transferred to a different group or setting (Shenton, 2004). It is the responsibility of the researcher to provide sufficient data in the research report to allow another researcher to determine if the study could be replicated in another context (Polit et al., 2010). In this explorative study it was not an intention to generalise findings to a different context, but to provide a wider scope of the study focus to facilitate further research.

3.11 Ethical procedures

Approval to undertake this study was granted by the University of Notre Dame Australia (UNDA), Fremantle campus, Human Research Ethics Committee (HREC). Once the nursing agency had sighted the approval from the HREC they agreed to participate in mailing out the flyers. Participants were assured that confidentiality would be maintained. Assurance of confidentiality was given via the flyer, information sheet and consent to interview.

Due to the sensitive nature of the topic of study, confidentiality was reaffirmed before commencement of the interview. The consent form stressed that participation in the study was on a voluntary basis and the volunteer could withdraw at any time without prejudice. All interviews were audio taped and transcribed verbatim by the researcher. To safeguard anonymity the participants were allotted a code.

As stated, to maintain confidentiality each envelope was coded; for example 01, 02 03 and so on. This participant code was aligned with an RN on the address list which was kept by the agency manager and stored in a secure locked drawer. Participants were also assured that no individual would be identified by name in the thesis or any subsequent report generated from this study.

Data were entered on a computer with password protected access known only to the researcher and supervisor. Audiotapes and transcripts of the interviews were kept in a locked cabinet in the School of Nursing and Midwifery building at the UNDA, Fremantle campus. Only the researcher and supervisors reviewed the transcripts. Transcripts, audiotapes and study findings will be destroyed five years after publication of the study as per the Australian Code for the Responsible Conduct of Research (NHMRC, 2007).

CHAPTER 4

RESULTS

The stated purpose of this exploratory study was to determine if a sample of RNs have any ethical concerns in caring for bariatric surgery patients. A vignette was developed to assist in reducing generalisations about the obese person and provide a focus by encouraging RNs to address the interview questions about a potential bariatric surgery patient in an individualistic manner. As anaesthetic and recovery room RNs, respondents were able to draw on their knowledge and professional experience in the care of bariatric surgery patients.

4.0 Research Questions

The following research questions were developed as a means of identifying ethical concerns that this group of RNs may have in relation to bariatric surgery:

1. What ethical concerns may RNs have in relation to bariatric surgery and bariatric surgery patients?
2. From the perspective of the RNs, what are the perceived benefits and the perceived risks of bariatric surgery? Are the risks ethically justified by possible benefits?
3. If RNs do experience moral uncertainty and/or moral distress; how do they resolve/not resolve this moral concern?

4.1 Demographic data

As discussed in chapter 3, the participants in this study were anaesthetic and/or recovery room RNs currently employed by a nursing agency. This agency allocated RNs to public and private operating theatres in the metropolitan area of Perth, WA. All of these nurses had extensive experience of working in many areas of surgery, including bariatric surgery. Of the nine interviewed, eight were females and one was male. This ratio was not unexpected since nursing is a predominately female profession. Table 4.1

shows the ages of the participants ranged from 27 to 53 years of age ($m=41$, *Standard Deviation* [SD]=8.2).

Table 4.1 Age range of participants

| Age range | Mean | Standard deviation |
|------------------|-------------|---------------------------|
| 27 to 53 years | 41 | 8 |

Table 4.2 Participants experience of nursing (in years)

| Years nursing | Mean | Standard deviation |
|----------------------|-------------|---------------------------|
| 6 to 33 | 22.25 | 12.1 |

Table 4.2 shows length of years nursing ranged from 6 years to 33 years ($m=22.25$, $SD=12.1$). Table 4.3 shows the years these nurses had been involved in bariatric nursing ranged from three to eight years ($m=5.5$, $SD = 1.8$).

Table 4.3 Participants experience in bariatric surgery nursing (in years)

| Years bariatric surgery nursing | Mean | Standard deviation |
|--|-------------|---------------------------|
| 3 to 8 | 5.5 | 1.8 |

Table 4.4 demonstrates that two of the sample group were hospital trained, whereas two had been hospital trained and later had undertaken a university conversion nursing degree course, while five participants were tertiary educated. Only one nurse worked solely in recovery, five worked in anaesthetics and three worked in both recovery and anaesthetics. Finally, six of the sample group had experienced working in the private health care sector, and the remaining three had worked in both the private and public sectors. It is the private sector where the majority of bariatric surgeries are undertaken; therefore, the participants had more exposure in these settings.

Data saturation was reached after nine interviews as participants gave similar responses to the questions and no new data were found. In relation to the demographic data, there were no differences in opinion in the responses to questions, regardless of years of experience, age or the environment in which they had worked.

Table 4.4 Demographic data of all participants (N=9)

| Participant | Sex | Age | Years in nursing | Years bariatric surgery nursing | Nurse education | Area worked | Sector |
|-------------|-----|-----|------------------|---------------------------------|-----------------|--------------|---------|
| 21 | M | 44 | 25 | 5-6 | Both | Both | Both |
| 1 | F | 51 | 33 | 6 | Both | Anaesthetics | Both |
| 34 | F | 53 | 36 | 6 | Hospital | Recovery | Private |
| 35 | F | 37 | 11 | 8 | Tertiary | Anaesthetics | Private |
| 25 | F | 27 | 6 | 4 | Tertiary | Anaesthetics | Private |
| 24 | F | 34 | 6 | 3 | Tertiary | Both | Private |
| 37 | F | 34 | 10 | 6 | Tertiary | Anaesthetics | Both |
| 23 | F | 47 | 27 | 3 | Hospital | Anaesthetics | Private |
| 40 | F | 45 | 24 | 8 | Tertiary | Both | Private |

Both = worked in anaesthetics and recovery areas

4.2 General perception of obesity

Although the participants in this study were RNs currently employed to care for bariatric patients in the recovery or the anaesthetics area, they were also members of the community and as such, expressed opinions about obesity in general or about the obese person. Attitudes expressed by the participants included the assumption it was the individuals responsibility to take charge of their own health. Participants described obesity to be caused by overeating and as such, may be indicative of psychological problems. Some participants were of the opinion that obese people were lazy and expected others to intervene to offer a “cure”. Interview responses from three different participants in the present study show these attitudes:

“I think society is too, ‘oh there’s not enough out there for people to do’. There is. It’s everybody’s own personal choice. I think people need to take their own responsibility” (P37);

“...you know, eating is definitely a mechanism that you use when you’ve got problems...” (P35);

“I think if someone is really, really fat they must, there must be an element of laziness about them so that’s why I think they may not want to know about it... (risks of surgery) They want someone to make their stomach smaller because that’s where the problem lies for them” (P40).

Results from the present study showed the participants’ perceived women are pressured by society and the media to reflect beauty and thinness. This pressure may compel some individuals to consider bariatric surgery. However, participant 24 commented that slimness is not achievable for everyone and this pressure reflected the unfairness of society. In contrast, the participants observed that men seemed to have less pressure placed on them in relation to their appearance. Essentially, men undergo bariatric surgery primarily for medical reasons, to improve their health. Results show that four participants identified that some bariatric female patients may feel pressured by societal and media expectations to undertake the surgery:

“...I think women are obviously more aware of how they look and want to make changes, whereas men possibly are not so fussed about it” (P24);

“I think society is all about the super slim person and its unobtainable sometimes, it’s not fair” (P24);

“I think it has a lot to do with the media and the concept of what you should look like and who you should be, in public, what you should look like” (P25).

Some participants lacked empathy for the obese patient, perhaps because the nurse was not obese and therefore may have perceived the patient was self-responsible for their obesity. Concern was voiced by participants in terms of care for the bariatric patient possibly being difficult due to anaesthetic and surgical risks, obesity comorbidities and manual handling issues. The following participant quote demonstrates a lack of empathy and concern for care:

“There’s a point sadly, that I say this, that if I’m not obese, then it’s not really my concern, but it is my concern because I’m going to be nursing these people...” (P21).

4.3 Application of data to research questions

Data from the nine one on one interviews were analysed using the ethical principles framework to address the three research questions. Each research question will be discussed individually to provide insight into the perceptions, experiences and concerns of RNs who work in the anaesthetic and recovery room caring for the bariatric patient following surgery.

4.4 Vignette

The use of a vignette was aimed to facilitate a distanced, objective view of a potential bariatric surgery patient with the purpose of reducing generalizations about the obese. Regardless of this intention, broad assumptions were made by participants about the changes bariatric surgery would make to “Amanda” as a person, a mother and a wife. The RNs tended to repeat “Amanda’s” comorbidities described in the vignette, although the researcher expected that the participants; from their knowledge and experience, would identify an array of possible problems such as possible benefits or risks of the surgery and general anaesthetic. Indeed, it was assumed through weight loss, “Amanda” would become more confident, happier and that her self-esteem would increase. Also, participants were of the belief that “Amanda” would lose weight and subsequently become a better mother because she would have increased energy to play with her children. Furthermore, “Amanda” would become more physically attractive to her husband, thus apparently improving their relationship. These presumptions are considered when addressing the research questions.

4.5 Research question 1

What ethical concerns may RNs have in relation to bariatric surgery and bariatric surgery patients?

Autonomous decision-making places care/intervention/treatment in the hands of the patient. However, the patient must first be fully competent and then fully informed about the planned procedure. Autonomy as a prima facie principle is overridden by

beneficence in the form of paternalism, in cases where the patient may not be competent. Autonomous informed consent was not the perception of the participants, indicating a perceived breach in the process. Four major concerns were identified by the RNs. Firstly: three participants mentioned that a change in lifestyle can facilitate weight loss; secondly, one participant mentioned that some patients were oblivious to the fact that some bariatric procedures are irreversible; thirdly, two participants were concerned some patients were unaware of the risks associated with this surgery, and finally, six participants expressed concern in relation to the lack of preparation of patients who may not understand the enormity of the intervention and questioned the patients' competence to consent to the surgery, on the basis that patients' may not be prepared psychologically (see Table 4.5).

Table 4.5 Participant’s perceptions of the informed consent process prior to bariatric surgery.

| No of responses | Concern | Example statement |
|------------------------|--|---|
| Three | Perceived lack of patient education on alternative weight loss methods | <p><i>“I think if someone is having a surgery like this they have to make massive lifestyle changes as well and a lot of people aren’t educated on that” (P24).</i></p> <p><i>“...maybe not just the surgeon should be talking to them and educating them but maybe a fitness instructor, dietician, would have, would be able to give them the other options” (P37).</i></p> |
| One | Perceived lack of understanding of the irreversibility of the surgery by the patient | <p><i>“...some of the surgeries are irreversible, you have to live with this decision and personally I think that that’s not explained enough to bariatric surgery patients. Definitely not explained They seem quite oblivious to the finality of the surgery...” (P21).</i></p> |
| Two | Perceived lack of understanding of surgical and anaesthetic risks by the patient | <p><i>Just all the risks increase majorally. I don’t know if a lot of people realise this or care really, they just think, everyone has surgery now, it’s normal...” (P35).</i></p> <p><i>“I don’t know if people are really totally aware of what they’re signing up for” (P1).</i></p> |
| Six | Perceived lack of psychological preparation/competence to consent | <p><i>“...if they haven’t got their mind set in the right way; this is going to work and I’m going to do the right thing and I’m going to eat exactly what’s correct for me, then I think you’re really pushing up hill. I think she needs to get the psychology in her brain right first, to make it effective, for it to be effective. But in my experience I’ve seen a lot of people who haven’t had that work up first” (P1).</i></p> <p><i>“It’s probably not the right thing to say but I don’t think that these people have been psychologically prepared for this surgery...he just didn’t seem to grasp the idea of why he was having surgery and his other behaviours for weight gain weren’t addressed as well” (P21).</i></p> |

A shift from paternalistic care to patient driven care means nurses might be required to provide bariatric nursing care to patients who claim entitlement to any level of care they desire regardless of the success or outcome. Such a situation may lead the RN to weigh up the pros and cons of bariatric surgery, known as the benefit versus burden debate. Five participants in this study referred to bariatric surgery being perceived by the patient as a “quick fix”. Participants’ emphasized bariatric surgery is not an instant cure for obesity and carries with it many surgical and anaesthetic risks. Participants acknowledged successful weight loss following bariatric surgery must encompass a long-term commitment to healthy eating and exercise, combined with adequate psychological intervention. The following statements exemplify that participants emphasise that bariatric surgery is not a stand-alone miracle cure:

“So I think that it can be a bad thing cos the patients can be taken advantage of, they really want an immediate magic cure, magic wand and these doctors are offering it” (P35);

“I think the average person, who’s not in the medical field, they can be influenced by advertising and if there’s an ad in the paper that says ‘Lose weight the easy way’, you have the surgery, that’s it” (P1);

“They see it as something they can have instantly and it’s going to solve their problem...” (P21).

Six of the participants advocated the patient should be educated about and consider less invasive methods of weight loss, at least as a precursor to bariatric surgery. However, since nurses are not privy to the consultation process between the surgeon and patient, the nurse does not know what information was given by the surgeon, the patient’s history or the extent of the patient’s prior weight loss attempts. The participants’ expressed there are other options to lose weight and bariatric surgery should be a later consideration. Less radical interventions should be considered initially, such as lifestyle therapies (diet, exercise, behavioural change). The following statements by participants echo these views:

“I don’t agree with bariatric surgery, necessarily as first port of call. I think there’s a lot of other things you could probably look into first” (P1);

“I’m not opposed to the surgery, I think it’s got a place; I just think that perhaps people choose it too quickly rather than perhaps seeing a good dietician and modifying their behaviour and doing some exercise” (P21);

“They should go out and seek other ways.... to lose weight in other ways before just getting this bariatric surgery done” (P37).

When the participants were asked; *“how do you feel about caring for bariatric surgery patients?”* The following responses present the RN’s concerns in relation to the possible psychological fragility of some of these patients. These responses illustrate recognition of the underlying psychological issues that could be the cause of the person’s obesity. The respondents also drew attention to the lack of insight that some patients had in relation to the behavioural patterns that were the cause of their obesity:

“It’s harder to nurse them because you’re trying to encourage them but I’ve seen where they get a mental block and they get all stubborn about it all, then they get abusive” (P1);

“...I think you have to be quite compassionate because it’s not just a physical, it’s an emotional, psychological issue with the reasons why she hasn’t lost weight” (P25);

“It’s not just you overeat or don’t exercise, there’s factors in there that sometimes people aren’t actually getting addressed or aren’t actually aware of” (P23);

“These people are very touchy anyway and I find they’re never usually a very strong person, probably they are at their lowest end when they decide this is what I’m going to do” (P34).

Participants were asked about the financial cost of bariatric surgery in order to gauge their opinion on the distribution of financial resources. This was done to determine their understanding of the ethical principle of justice. Three participants were aware of the cost of bariatric procedures; including surgical and anaesthetic fees. Participants 21, 37 and 40 estimated the cost of gastric banding surgery was between \$5000 and \$15000, while the remaining participants did not know the cost of the procedure. This cost included the fee charged by the hospital, the surgeon, anaesthetist and the cost of the specialised bariatric equipment used in the theatre setting. Two participants viewed bariatric surgery as a money making venture by doctors involved in these procedures. Bariatric surgery expenses may be seen to reduce the funding, operating room and ICU bed availability for other health services. Participants elicited these responses in relation to financial costs:

“...some people think it’s not right and they (doctors) do it just for a money making thing, when they could give other options” (P34);

“So I think there could be a bit of the dollars involved in something, that could be a reason why so many people are coming through whereas maybe some of these people could have, would have lost weight via different options” (P37).

Responses from four participants expressed concern in relation to the financial cost of specialised bariatric surgical equipment. Whereas two participants identified the financial investment to service bariatric surgery and bariatric patients:

“I do know that most of the equipment that we use for them is a lot more expensive and that you have specialist equipment, just for the bariatric, extra-large sizes. Just everything has to be bigger and longer instruments... and I’m sure it needs more staffing” (P35);

“In surgery I think it’s the equipment that you need, you probably need quite a bit of consumables, which would cost, different bed type than you would for a normal weight person” (P1).

All participants reported they had not received any nursing education in relation to caring for an obese patient and relied on information on bariatric surgery from doctors and colleagues. The participants in this study have worked within the bariatric setting from a range of three to eight years, yet they appeared deficient in knowledge of obesity co-morbidities, bariatric surgery and the associated surgical and anaesthetic risks. When asked:

“How do you feel about your past education on bariatric surgery?”
and *“Are you aware of the different bariatric surgery methods?”*

All nine participants responded that they lacked knowledge about the different types of bariatric surgery. Overall, these responses demonstrate a lack of knowledge about bariatric surgery, yet these participants have been nursing from six to 36 years. They may not have had education in their nursing training/education; however, it seems they have not sought information. Indeed, none of the participants identified RYGB as a form of bariatric surgery; they referred to lap bands and sleeves only. This may be due to the limited popularity of malabsorptive bariatric procedures. As the following quotes show, they had little understanding of what these surgeries involve:

“Not much actually. I actually did a graduate diploma quite a few years ago and it was not covered at all” (P25);

“A little bit but not a great understanding as to what they do and why for each patient...” (P34);

“Very weak. I suppose I know about gastrectomies and sleeves but I don’t know the intimate details...I don’t think I’ve ever had any education across any sphere of the hospital or at uni...” (P24);

“I just sort of have a bare minimum of understanding and just about lap bands” (P23).

Table 4.6 provides statements which demonstrate the participants lacked education about bariatric surgery. The statements show there was a reliance on

gathering information when in the workplace setting; however, the participants did not participate in self-directed learning.

Table 4.6 Lack of education expressed by all participants in relation to bariatric surgery

| Participant Code | Statement | Years Bariatric surgery nursing | Education (tertiary or hospital) |
|-------------------------|--|--|---|
| 21 | <i>"...a lot of this surgery has been thrust upon nurses and in the workplace I certainly haven't received any education" (P21)</i> | 5-6 | Both |
| 1 | <i>"I haven't had any education, any formal education" (P1)</i> | 6 | Both |
| 34 | <i>"I haven't actually had any (education), it's just what you pick up from doctors and nurses around about" (P34)</i> | 6 | Hospital |
| 35 | <i>"I don't think I really got any education" (P35)</i> | 8 | Tertiary |
| 25 | <i>"Not much actually. I actually did a graduate diploma quite a few years ago and it (bariatric surgery) was not covered at all" (P25)</i> | 4 | Tertiary |
| 24 | <i>"...I don't think I've ever had any education across any sphere of the hospital or at uni..." (P24)</i> | 3 | Tertiary |
| 37 | <i>"...you hear enough over the years to pick up and get an idea of the ins and outs of bariatric surgery. I haven't specifically been educated" (P37)</i> | 6 | Tertiary |
| 23 | <i>"That (education) was nil. Yeah I would like a lot more" (P23)</i> | 3 | Hospital |
| 40 | <i>"My bariatric surgery education has been on the job pretty much... so I feel like I don't know enough about it" (P40)</i> | 8 | Tertiary |

Both =tertiary and hospital educated

This lack of education also extends to some of the participants' inability to recall or identify any current or past health promotion campaigns relative to obesity. Of the nine participants, six were unable to recite any aspect of a health promotion campaign they had seen or heard about in the media. One participant described the "Find thirty" campaign which was a government funded promotion encouraging the public find 30 minutes of exercise per day. The same participant mentioned the "Measure up" campaign, a health promotion move aimed at improving self-awareness of increased waist circumference and its link to overweight or obesity. One participant mentioned Jamie Oliver and the promotion of nutritious food in schools. Another participant mentioned the "gut" campaign, which one presumes referred to the visual image of an overweight torso and the internal adipose tissue surrounding vital organs.

Concern was also expressed in regard to the access of bariatric surgery. In essence, a third (33%) of respondents mentioned that access was not based on fairness and equity; rather, it was the patient with private health insurance who had the advantage. Therefore those patients within the public sector, without health insurance, who may also require this intervention, were disadvantaged. The following statements show the participants are mindful of this inequality of access and identify that the low socio-economic group are at a greater disadvantage:

"...if you could afford to have it done, you could go and have it done" (P1);

"There's not enough money to go around to help everyone and the people in the lower socio-economic status have less money so they need to rely on the public health system and there's only so much quota allocated for each year, and if you're not in that quota then tough luck sort of thing, too bad, you have to find your own way of dealing with it" (P35);

"I mean, there seems to be a lot of people coming through in the private sector so anyone that has the capability to pay then yeah, I think they've got more than enough access, whereas in the public sector you see very little bariatrics..." (P37).

4.6 Research question 2

From the perspective of the RNs, what are the perceived benefits and the perceived risks of bariatric surgery? Are the risks ethically justified by possible benefits?

All surgery, major or minor, attracts some level of risk. Results from this present study show the participants are cognisant of these risks. Of the nine participants, eight mentioned diabetes mellitus, nine mentioned hypertension and four noted heart disease as significant obesity comorbidities requiring management during bariatric surgery and anaesthesia. The presence of obesity comorbidities, anaesthetic risk and the immobility of the bariatric surgery patients due to their size, appeared to most concern the group of anaesthetic and recovery RNs. The participants stated the obese patient is at greater risk of surgical and anaesthetic complications and ultimately, death was the real issue. The following statements highlight the urgency of these specific risks when undertaking bariatric surgery:

“There’s a risk with the anaesthetic. There’s the risk that at the end of the day, the worse scenario may be that she could die through having surgery” (P23);

“...with the weight, anaesthetics are always a bit of a problem, there’s always more risks with people that are overweight; they’re compromised during anaesthesia...” (P34);

“Surgery is always risky and as a patient that’s obese, it’s even more risky, it puts a lot more stress and a lot more problems to do with the surgery, for the surgeon and the anaesthetist and all the staff, your back, having to move these people, you know, if they’re lying supine and they all of a sudden start to vomit, how are you going to turn them on their side?, you’ve got no chance pretty much” (P35).

The RNs in this present study identified there is a large physical burden associated with nursing these high-risk bariatric patients. These statements emphasise

the pressure of caring for bariatric surgery patients. As the following statements demonstrate:

“... (caring) it can be physically hard on you. You come home and you ache and there’s a lot more involved physically” (P23);

“In terms of even just like transferring the patients and stuff like that, it’s hard work and that physically can have a massive strain on us” (P24);

“...we have to adjust and accommodate for larger people so maybe that’s a negative thing because it puts a lot of pressure in healthcare workers...lifting, looking after people with huge weights...” (P21);

“They’re (bariatric patients) probably more stressful, even though there’s a no lift policy, people still lift, so probably more stress” (P25);

“...It can be quite scary sometimes because this patient is larger than life and you’re having to maintain and look after them and it’s scary” (P24).

Potential anaesthetic risks were also identified by the participants and included: difficulty maintaining an airway (n=4), difficult intubation (n=3), oxygen desaturation (n=3), hypertension (n=2) and embolism (n=3). The problem of maintaining an airway was largely attributed to the increased circumference of the patient’s neck and thorax. This increase is due to the extra layers of adipose tissue that inhibits or reduces neck extension, which is necessary to allow intubation. Successful mask ventilation is required to compensate for low oxygen reserves and high oxygen demand. A sample of participant responses related anaesthetic risks are presented in Table 4.7.

Table 4.7 Number of responses by participants in relation to perceived anaesthetic risk

| # of participants | Risk | Example statement |
|-------------------|----------------------------------|--|
| 4 | Difficulty maintaining an airway | <p><i>“There’s always the risk that when she goes to sleep that you can lose her airway because people that are overweight do tend to have more problems with their anaesthetic” (P23)</i></p> <p><i>“I think in terms of airway management, with the patient coming into recovery it can be really hard work” (P24)</i></p> |
| 3 | Oxygen desaturation | <i>“...the desaturation at the start because there’s so much body mass that they desaturate very quickly, if they can’t get an airway down very quickly then all hell breaks loose pretty quickly” (P37)</i> |
| 3 | Difficult intubation | <i>“...intubating the patient, their patient anatomy is distorted so it’s not easy to intubate them...” (P35)</i> |
| 2 | Hypertension | <i>“Someone at the age of thirty shouldn’t really need an arterial line to monitor their blood pressure but these people do” (P35)</i> |
| 3 | Embolism | <i>“There’s a risk of DVT, PE, stroke...” (P34)</i> |

In addition to the risks associated with the anaesthetic, the participants also described the possible problems with the surgical procedure; such as: bleeding (n=6), anastomosis leak (n=1), gastric band slippage or erosion (n=2), organ perforation (n=3), adhesions (n=2) and infection (n=5). Risk of infection could be attributed to several causative factors, such as increased perspiration and friction between fat folds resulting

in skin breakdown. This risk can be exacerbated due to decreased mobility, decreased vascularity of the adipose tissue, protein deficiencies and diabetes mellitus type two.

Postoperative pain management was mentioned by four participants, perhaps due to the notion that management of pain postoperatively may be compromised due to poor absorption of opioids from adipose tissue into the bloodstream. The consequence of the increased amounts of opioid analgesia administered to a bariatric patient, combined with direct surgical stimulation of the gastric region may result in nausea and vomiting. Continuous vomiting and retching can further increase pain, which in turn raises the risk of bleeding and anastomosis leak due to increased intra-abdominal pressure. Due to the impact on the patient of these side effects, obesity comorbidities and surgical intervention, these patients require high acuity care as the following participants confirm:

“If you’ve ever looked after bariatric people it can be quite difficult, dealing with their nausea, dealing with their blood pressure... post op pain, ongoing nausea, problems with digestion, awful side effects from the surgery” (P21);

“They’re just like any other person so you’ve just got to do the same as you would for anyone else, it just makes it a bit harder, that’s all” (P35);

“...I always feel that I can’t relax just in case something happens and I get quite nervous when I’ve got to maintain the airway...” (P23).

4.7 Concerns about the long-term consequences of bariatric surgery

As well as the immediate problems associated with bariatric surgery, the participants commented on the possible long-term issues. The participants mentioned the following issues associated with post bariatric surgery patients: diet and nutrition, social impacts on eating and drinking restrictions, reflux/vomiting and nausea, irreversibility of some bariatric surgeries, failure to lose weight and the potential for excess skin following substantial adipose tissue loss. Participants were concerned for the social impact of a restricted diet for post-operative patients and the possibly of

postoperative malnourishment. The following quotes emphasise the participants reservations about the short and long term issues related to this surgery:

“...ongoing nausea, the feeling of fullness, vomiting...Eating is such a social thing to do with other people and to restrict your life by that is really an ongoing long term effect” (P21);

“Certainly if they have a gastric bypass and they find that it doesn't suit them it has a huge impact on your life, you can't go out and socialise as well or they do become malnourished there's not any going back from there” (P23);

“I'm not exactly sure how long we've been doing bariatric surgery for, but we still don't really know what the long term effects are for these people” (P35);

“I don't know if there's enough research in the area that people know what they've gone into and got done and what the outcomes will be ten, fifteen years down the track...” (P37).

4.8 Perceived benefits of bariatric surgery

The vignette presented Amanda's physiological obesity co-morbidities which included hypertension, diabetes and infertility. When the participants were asked:

“What are the possible benefits of bariatric surgery for Amanda?”

Nine participants assumed Amanda would lose weight and therefore, experience an improvement in obesity comorbidities. In relation to these co-morbidities eight of the respondents mentioned diabetes, nine described hypertension, one mentioned heart disease, three noted healthier joints, one described increased fertility and one spoke of a decreased incidence of emboli. Participants explained how Amanda's health would improve as a result of this surgery:

“The diabetes definitely and hypertension, sure that will definitely help if she could reduce her intake and exercise and reduce her BMI. Yeah, if she follows through with the eating and diet and all these things, then definitely it would increase her fertility” (P35);

“I definitely believe that obviously if all things go well, if she follows the rules, follows a good approach to life, follows the diet, follows the regime that the surgeon and GP have recommended her, yes she can improve her life and reduce, probably even reverse the diabetes, lower her cholesterol and lower her blood pressure” (P25).

4.9 Impact of bariatric surgery on relationships

As stated, the participants were given a vignette presenting the health issues of “Amanda” which were associated with her obesity. These health issues included diabetes, hypertension and infertility. The participants were asked:

What would be the possible positive and negative impacts of the surgery on Amanda’s children and family?

Responses to this question were varied; however, data analysis revealed responses could be allocated to three different themes: the impact on Amanda’s relationship with her children and husband, the perception of Amanda as a mother and Amanda’s physical and psychological health. Table 4.8 presents examples of the RNs’ views on the positive impacts of bariatric surgery in relation to Amanda’s family. The following quote encapsulates the perceived benefits of this surgery for Amanda:

“If she feels better, she’s got a better relationship with everybody because she’ll be more outgoing, more confident and so that makes her children more confident and more outgoing and her husband will obviously be happy. She’ll have a better family unit” (P34).

Table 4.8 Perceived positive effects of bariatric surgery on Amanda's life

| Effect of bariatric surgery on relationship with husband | Effect of bariatric surgery on relationship with her children | Effect of bariatric surgery on Amanda as a person |
|--|--|---|
| <p><i>"Her husband would probably be more attracted to her and she'll have more energy to be with him and do things with him and maybe more of a connection, rekindle their connection" (P35)</i></p> | <p><i>"She'd probably cope with her children a lot better if she likes herself better" (P34)</i></p> | <p><i>"She might have more energy and feel better within herself" (P21)</i></p> |
| <p><i>"She'll be easier to live with if she's happier within herself. A happier family. Happier mums make happier children, happier mums make happier husbands and just life in general becomes better" (P34)</i></p> | <p><i>"She may be able to be a lot more active with her children and be sort of more involved playing with them, taking them swimming. You know if she feels better about herself and happier about herself then that's, that has a big impact on her kids anyway" (P23)</i></p> | <p><i>"Probably her self-esteem, it would give her more confidence, a better outlook in life, She'd feel better about herself, mental health probably more stable..." (P34)</i></p> |
| <p><i>"I'm sure that shes probably under confident and not healthy enough either so this in terms would help her in that sense and possibly intimacy with her husband and things like that, that might be effected in a positive way" (P24)</i></p> | <p><i>"...she'd be able to play with her children a lot more, keep up with them, get down the park, get more exercise with them, she might be able to see them for longer if she lives well, in the long run" (P37)</i></p> | <p><i>"It would give her more energy and ability to get around and do things" (P1)</i></p> |
| <p><i>"If he really cares about her and her health, I suppose he would be positive and encourage her to maybe go get the surgery and maybe it might improve his relationship overall because if shes healthy, he might see a positive change so he's more healthy and I think definitely Amanda would be in that healthy stage, playing outside with the kids and develop a better relationship" (P25)</i></p> | <p><i>If she feels better =, shes got a better relationship with everybody because she'll be more outgoing, more confident, and so that makes her children more confident and more outgoing and her husband will obviously be happy. She'll have a better family unit" (P34)</i></p> | <p><i>"She'd have more energy; she'd feel so much better about herself" (P35)</i></p> |
| | <p><i>"...if the surgery is successful, that's a positive thing for the family. Amanda might have more energy; she'll be a good mother" (P21)</i></p> | <p><i>"I'm sure she'll have a lot more confidence within herself..." (P24)</i></p> |
| | <p><i>"...she'd definitely be able to interact with her children more because kids are so active" (P35)</i></p> | |
| | <p><i>"I'm sure she'll have a lot more confidence within herself, she'll be hugely more mobile to play, to do things with her children and be more active..." (P24)</i></p> | |
| | <p><i>"...if she loses the weight she can enjoy taking them out, spending quality time together and stuff" (P25)</i></p> | |
| | <p><i>"Then she'd be able to have a better quality of life and be able to spend more time with her children, doing activities with them, outdoors, enjoying life with them, instead of not being able to keep up" (P35)</i></p> | |

4.10 Perceived negative effects of bariatric surgery on Amanda's family

Participants' responses to the possible negative impact of bariatric surgery on Amanda's family were limited due to Amanda's presumed weight loss. Responses were based around concerns for recovery time, the cost of the surgery, a possible lack of

weight loss, changes in diet and possible follow-up for inflation of bands as the following quotes confirm:

“Psychologically, if it’s not successful then that’s a negative. That might weigh on her family and her relations with her children and husband” (P21);

“Problems could be ongoing, which means a negative effect to the children and to her relationships probably, all the focus, the cost factor, the sickness, the effects on relationships...” (P1);

Negative, she’s obviously going to have a recovery period and there’s also her diet, it’s going to change dramatically....so if she’s sharing meals with her children...” (P37).

Overall, the participants described more positive outcomes of bariatric surgery for Amanda’s family (if weight loss occurred), than negative effects.

4.11 Research question 3

If RNs do experience moral concerns, how do they resolve/not resolve these concerns?

The burden versus benefit debate was implied in the participant’s responses. Such concern emerged when the participants described:

- (a) the impacts of bariatric surgery;
- (b) how they felt about caring for bariatric surgery patients;
- (c) how the surgery impacts on the health care system;
- (d) if they had any moral concerns in relation to the surgery.

The study findings indicated the participants navigated such questions by utilising several means:

- (a) using obesity comorbidities provided in the vignette as both potential risks during surgery and potential conditions to overcome;
- (b) assuming Amanda would lose weight following surgery;
- (c) taking a stance of moral indifference by failing to seek an education on bariatric surgery care;
- (d) employing an attitude of stigma and blame toward obese patients;

- (e) avoiding moral responsibility through transference of this responsibility to doctors providing bariatric surgery;
- (f) avoiding being present during the surgery and thus moral confrontation with potential futility;
- (e) discussing their involvement in care of the bariatric surgery patient due to potential injury, stress and subsequent burnout.

Moral concerns such as: the benefit versus burden debate in relation to bariatric surgery, equity of access, cost, education deficits, obesity stigma and the informed consent process also arose from the interview process.

4.11.1 Obesity stigma

Only one participant expressed concern in relation to the prejudicial remarks:

“I still don’t believe that people should be judging them, making rude comments, rude jokes about them. That’s the one thing I don’t like, the one issue that comes up a fair bit whenever I go into bariatric’s...” (P25).

Although only one participant voiced this concern, it is worth considering due to the growth of bariatric surgery, evidence of obesity stigma and the predicted increasing prevalence of obesity. Obesity stigma was identified in the following participant transcript:

“I think people need to stop blaming others for being fat” (P37);

“I think it’s about people being lazy” (P21).

Evidence of obesity stigma may be seen to be indicative of societal views of the obese, as healthcare staff may be seen as representative of society in general.

4.11.2 Informed consent

In practice, RNs are not directly involved in the informed consent process between doctor and patient, nonetheless the RN does expect the patient to verbalise what intervention they will undertake and demonstrate some understanding of the risks

and benefits of the procedure. The following statement indicates there is doubt about the patient being fully aware of the implications of the surgery:

“I just think that they aren’t properly informed and that doesn’t seem very fair and perhaps our role as nurses is education” (P21).

The respondents in this study did express some reservation about the participation of the patient in some stages of the informed consent process. Results indicate that participants were concerned informed consent was not achieved and due to psychological issues these patients do not grasp the full dimension of what bariatric surgery involves. As demonstrated below, participants perceived that these patients’ were vulnerable due to their emotional and/or psychological state:

“It’s probably not the right thing to say but I don’t think that these people have been psychologically prepared for this surgery” (P21);

“I think she needs to get the psychology in her brain right first, to make it effective, for it to be effective. But in my experience I’ve seen a lot of people who haven’t had that work up first... I think the average person, who’s not in the medical field, they can be influenced by advertising, and if there’s an ad in the paper that says ‘Lose weight the easy way’, you have the surgery, that’s it (P1);

“...there’s probably a lot of things going through their mind at the time and I’m sure they don’t hear a lot of it” (P35);

“...even though you try to give them as much information as they want and they sign the document, due to anxiety or emotional issues they still can be quite vague as to what might happen during the surgery, after the surgery” (P25).

Furthermore, four participants communicated concern for the understanding stage of informed consent. It is vital that not only are the potential benefits, risks, irreversible nature of some procedures and alternatives disclosed, but understanding of these issues are confirmed. Below is participant transcript that exemplifies a perceived lack of understanding by the patients:

“I just feel a little bit concerned that the patients aren’t given adequate information about what this surgery involves...there will be an odd statement that a person has made briefly when you’re asking them the pre op questions before they have surgery and sometimes it’s a very simple thing with an easy answer yet they don’t seem like they know exactly what is happening” (P21);

“Yeah I do think they have the formal consent, but I do think that, I’m not sure of what they get told preoperatively about it and I’m not sure if they know the full danger of any surgery” (P34).

4.11.3 Equity of access

Participants expressed concern for the funding of bariatric surgery by health insurance companies and Medicare, considering their perception of obesity as a self-inflicted health issue. Concern was related to the perceived depletion of health insurance and Medicare funds, instead of using resources for alternative causes, as the following demonstrates;

“...these people, I don’t like to say these people but people that are obese and it’s due to their own choice and then there’s people that are dying like kids...” (P35).

Also, participants noted that bariatric surgery was mainly available to those people who have access to the private hospital system, as opposed to those patients who are restricted to the public healthcare system. This inequity of access is recognised by the following participant:

“I mean there seems to be a lot of people coming through in the private sector so anyone that has the capability to pay then yeah, I think they’ve got more than enough access whereas in the public sector you see very little bariatric’s...” (P37).

The perceived overuse/over prescription of bariatric surgery was noted by participants in this present study. This situation was seen as a drain on health care

system since bariatric surgery patients are allocated to high dependency beds, ICU's, emergency departments and operating theatres. This in turn, further exhausts staff resources and healthcare funds. The following quotes illustrate the perception that bariatric surgery is misused:

“There’s definitely probably some that just won’t motivate themselves to lose the weight so it’s probably in the same hazy area as how many caesareans get done” (P37);

“I think there’s a lot of times when patients come in for major bariatric surgery and there is no way they’re obese...That patient doesn’t really need the operation and they could end up dying because of that choice” (P35).

In conclusion, participants as RNs’, implicitly described moral concerns for bariatric surgery. This concern provides valuable insight into the care of bariatric surgery patients and the requirements of education for nurses in this growing field. The following statement represents the consideration of pro’s and con’s known as the benefit versus burden debate which RN’s are faced with on a daily basis and is representative of the possible futility of bariatric surgery.

“That patient doesn’t necessarily need the operation and they could end up dying because of that choice...” (P35).

CHAPTER 5

DISCUSSION OF RESULTS

In this chapter the results of the data analysis are considered in relation to the research questions. The interpretation of the findings reported in Chapter 4 was contextualised by considering results from previous research, in relation to the nurses' perception of bariatric surgery and the perceived concerns of caring for bariatric patients. This study's findings are discussed and its limitations assessed.

5.0 What ethical concerns may RNs have in relation to bariatric surgery and bariatric surgery patients?

Nurses have an ethical and professional duty of care that includes moral responsibilities. As practitioners, nurses are guided by the Code of Ethics for Nurses in Australia (ANMC, 2008). Nonetheless, personal and professional ethical values may not be congruent with professional duties in an area such as bariatric surgery. The increase in bariatric surgery coupled with an array of comorbidities associated with obesity, the absence of longitudinal studies on post bariatric surgery patients, the medicalisation of obesity and the demanding nature of caring for bariatric patients highlights the challenges of weighing of potentially reversible obesity co-morbidities (through weight loss), against the anaesthetic and surgical risks involved in bariatric surgery, long term effects of surgery and possible failure to achieve weight loss. This balance between potential harm and the potential benefit of bariatric surgery is recognised as the burden versus benefit debate (Camden, 2009/2010).

Findings from this present study showed that anaesthetic and recovery room RNs express ethical concerns associated with caring for these patients. The communication of these concerns, in ethical terminology, was often impaired by a lack of healthcare ethics education demonstrated by nurses. For example, no participant demonstrated knowledge of the ethical principles of beneficence and nonmaleficence. Further gaps in ethics education were demonstrated by a lack of understanding of: burden versus benefit, the informed consent process, equity of access, ethical principles and moral concerns. Results also demonstrated a lack of bariatric surgery and obesity specific education of participants. Study findings indicate a need for education and support for any ethical concerns nurses may have associated with bariatric surgery

(Burkhardt and Nathaniel, 2008; Camden, 2009; Ide et al., 2008; Johnstone et al., 2004). The following ethical concerns described by the participants in this present study are now discussed.

5.1 Lack of informed consent

Perioperative RNs are involved in confirming that a patient has participated in the informed consent process preoperatively and should be aware of the steps to informed consent. Participants believed if the patients signed the consent forms, they gave consent for the surgical procedure. According to Brandon, Puziferri and Sadler (2010) some individuals do not attend to, or effectively retain, the information they are given about procedures they may undergo in clinical practice. Furthermore, any patient may be ill equipped to fully understand the extent of implications of treatment. Factors which can affect a patient's ability to comprehend what is involved in surgery include: past experiences, knowledge of the procedure, psychological and/or emotional status, the complex nature of the clinical situation and willingness to understand. Informed consent must include explicit verification that patients are aware of all the options available to them, the possible outcomes of each option and the likely outcome with non-treatment. If the participants in this present study had a clear understanding of requirements of informed consent they would be fully cognisant of the associated lapses. These issues include: a lack of understanding of the procedure by the patient, a lack of disclosure of benefits, risks and alternatives provided by the surgeon and anaesthetist, the possible incompetence in the consent process due to the potential effects of depression and vulnerable emotional states (Hofmann, 2010). It could be argued that any of these issues cause a breach in the informed consent process. In terms of competence to consent, there are around 30 tests designed to assess competence to consent but the actual application of these tests in practice remains ad hoc (van Staden, 2009).

5.2 Lack of nurse education in relation to bariatric surgery

This study's findings in relation to the deficit in nursing education specific to bariatric surgery echoes the study results by Brown et al., (2007) and the CMBRM (2005). All participants stated they had not received any bariatric surgery specific education. Moreover, they also demonstrated a knowledge deficit in healthcare ethics (for example: describing informed consent as "formal consent"). Seven of the nine

participants in this study were tertiary educated, yet despite the promotion of self-directed learning in tertiary environments, this was not undertaken by these RNs. In essence, these participants did not actively seek education, but relied heavily upon information provided by surgeons and anaesthetists intra-operatively and did not seek further clarification of this information. One might propose this situation is representative of a paternalistic style of healthcare whereby some nurses are influenced by the opinions and judgements, however biased or inaccurate, from those who are perceived as having more power, for example, surgeons (Riley & Manias, 2006). It must be noted that seven of the participants were tertiary educated and perhaps education about bariatric surgery was not commonplace at their time of graduation. However, this does not exempt nurses from seeking information about the procedure or in fact any procedure that they may be involved in. In essence, nurses have the responsibility to be proactive in their learning, as part of registration with the Australian Health Practitioners Regulation Agency (AHPRA). This responsibility for updating education on new procedures also falls upon the staff development nurses in operating theatres. Given that all nine participants had been involved in bariatric surgery from three to eight years, these nurses should have sought education or in house education should have been provided.

Exposure to education in healthcare ethics may result in some nurses experiencing a “Gestalt shift” in their moral perceptions. In effect this may result in the identification of ethical issues in places of work more readily than prior to this learning (Johnstone et al., 2004). The five most frequently cited ethical issues reported by the nurses surveyed in a Victorian study by Johnstone et al., (2004) were: protecting patients’ rights and human dignity, providing care with possible risk to nurse’s health and respecting/not respecting informed consent to treatment. Within this present study, the apparent lapses in healthcare ethics education should prompt nurse educators in the perioperative field and tertiary based nursing degrees, to re-evaluate what information nurses require to manage ethical concerns in clinical practice. This possible lapse in knowledge also demonstrates the need for a greater emphasis on self-directed learning and hospital supported study sessions for perioperative RNs.

Apart from obvious gaps in specific bariatric surgery nursing care knowledge, study participants also demonstrated a lack of awareness of current and past government health campaigns, aimed at reducing obesity and overweight in society. Two thirds of participants in this study had no recollection of any government media health

campaigns aimed at obesity prevention, possibly reflecting a failure in the government's health promotion efforts and suggesting a lacklustre image of the ability of these RNs to stay in touch and up to date with current public health policies and public health initiatives. Given the intense multi-media approach, it would be rare for a person not to be exposed to the health promotion campaigns.

5.3 Concern that bariatric surgery is perceived as a 'Quick fix'

Concern was expressed by the participants in relation to the level of psychological support offered to bariatric surgery patients. Since these RNs are not involved in the counselling session of the patient prior to surgery, they did not know what type of support was offered. Thus, the participants were concerned about the level of support offered to the bariatric patient and if this support was sufficient to assist the patients' potential success to lose weight. One may suggest the psychological welfare of the bariatric surgery patient should be given as much thought and attention as that of anorexia patients if obesity is perceived as an "eating disorder". With the medicalization of obesity, it has evolved that this health problem has become a "surgically treatable" condition and bariatric surgery offers "quick fix". The "quick fix" perception by patients and those who share this belief may result in the emergence of a number of ethical issues.

Participants in this current study raised concern for the following issues: Firstly, concern for the possibility that patients' may not have tried, or considered, other non-invasive alternatives prior to surgery. O'Brien (2010) reflects the view that lifestyle therapies (diet, exercise, behavioural change) should always be the first line of management. Secondly, bariatric surgery is supported by private health care providers (Medibank, 2010) and also attracts Medicare and government funding. Thus, participants' described their concern in relation to the cost of bariatric surgery, the purchase of equipment for the bariatric patient and the distribution of healthcare resources. Thirdly, those individuals without private health care insurance are less likely to access this surgery, despite the documented link between obesity and poverty (WHO, 2011). Furthermore, the perception by patients that bariatric surgery will result in weight loss without the need for a change in diet or a take up of exercise. Finally, the perception of bariatric surgery as a "quick fix" may be related to the change from a paternalistic healthcare system to one of increased patient autonomy in many Western countries. Added to this is a new generation of physicians being educated to adopt a

“patient-centred” approach (Gallagher, 1997; Laine & Davidoff, 1996). Furthermore, the perception of bariatric surgery as a “quick fix” could be due a lack of information provided to, or absorbed by, a group of obese and overweight patients with a possibly vulnerable psychological state.

5.4 Burden versus benefit

The burden versus benefit debate consists of evaluating the pros and cons; that is, the risks and benefits of a situation (Camden, 2010). In relation to bariatric surgery, the RN as the moral agent may be placed in a precarious position to consider the pros and cons for the patients and for their involvement in the surgery. Of consideration by nurses, is the outcome of the surgery in terms of weight loss. Although such outcomes may be hoped for, they are not guaranteed. In order to decide whether the risks outweigh the benefits or vice versa, the nurse may attempt to evaluate the anaesthetic and surgical risk, post-operative weight status, postoperative psychological and emotional health, possible resolution of obesity comorbidities and the long-term outcomes for nutrition. However, these important issues may cause distress for nurses involved in bariatric surgery (Camden, 2009/2010). As patient advocates, nurses may find they are expected to participate in bariatric surgery involving a patient they perceive could face greater potential risks than benefits. In ethical terms this situation is described as a moral dilemma, whereby a person is forced to choose between two equally unfavourable, mutually exclusive options. Essentially, if RNs should participate in the surgery or not and likewise, whether patients undergo the surgery or decline. Institutional constraints may also cause the nurse to feel obligated to participate in bariatric surgery. This obligation may lead the RN to experience moral distress which is correlated with a high rate of nurse attrition (McClendon & Buckner, 2007). This outcome could be attributed to the failure of nurses and nurse managers to recognise the ethical concerns of nurses. Furthermore, the physical stress on RNs of manual handling the anaesthetised or post anaesthetic bariatric patient could be perceived as another aspect of burden or risk. If ignored, this physical burden and the possible injuries may also lead to burnout and attrition.

5.5 The cost of bariatric surgery and the physical impact of nursing these patients

The participants voiced concern about the substantial expense bariatric surgery imposes on the healthcare system. Described in this study was concern for the expense of surgical instruments, anaesthetic equipment and bariatric operating tables, as well as the financial gain by private bariatric surgeons. When asked about the cost of bariatric surgery to the healthcare system, participants were unable to provide an opinion and were unable to estimate the cost of bariatric surgery. This perhaps, is another indication the nurses did not delve into the impact of this surgery on healthcare or may be representative of indifference on their part. Furthermore, participants may have considered their subjective opinion to have little value in the money making venture of private healthcare.

5.6 Inequity of access to bariatric surgery

Research has shown there is inequity of access to bariatric surgery for the low socio-economic status community (Kitto, 2007; Saarni et al., 2011; Talbot et al., 2005). This inequity is exacerbated by the known link between poverty and obesity (WHO, 2011). Participants in the current study identified there was inequity of access by the low socioeconomic status community to bariatric surgery. In essence, patients who can afford private health insurance and out of pocket costs, have the most access. Although in the public health care sector the government meets the cost of bariatric surgery, availability is very limited (Talbot et al., 2005). The WHO (2011) states there is a link between low socioeconomic status and obesity; however, it has been shown that those with the least resources have the least access to bariatric surgery through the public health care system.

5.7 Obesity stigma

Results from this present study support previous research (Brown & Thompson, 2007) demonstrating that some nurses displayed a lack of empathy to overweight or obese patients. RNs described obesity as the result of lifestyle choices and identified the patients as responsible. This attitude may also reflect the demands of social media, whereby some believe thinness is valued above all else. Furthermore, the focus of society on appearance may explain why more women access bariatric surgery for image reasons than men. A participant from this current study demonstrated a negative and judgemental attitude that implied “Amanda” would be a better mother if

she were thin. The stressful, physically demanding nature of bariatric surgery nursing care may also contribute to this negative perception of the bariatric patient. This stigma however, is of great concern when one considers it is predicted the demand for bariatric surgery will increase (Smith et al., 2008). According to Hofmann (2010) research demonstrates prejudice against obese people does exist and that health professionals often share such prejudices. Prejudices may lead the obese individual to be subjected to negative attitudes and “fat phobia” by those entrusted with their care (Poon & Tarrant, 2009).

5.8 From the perspective of the RNs, what are the perceived benefits and the perceived risks of bariatric surgery? Are the risks ethically justified by possible benefits?

Results from this present study show the participants, following reading about “Amanda”, were cognisant of various obesity comorbidities such as: diabetes mellitus, hypertension and heart disease. As research has shown, the risks of bariatric surgery not only incorporate intraoperative and postoperative surgical and anaesthetic risk factors, but also the co-morbidities associated with obesity. Obesity comorbidities impact on the respiratory, cardiovascular, musculoskeletal and endocrine systems (O’Neill & Allam, 2010).

Participants in this current study described some of the possible surgical complications of bariatric surgery as identified in the literature (Ide et al., 2008). These included: bleeding, anastomosis leak, gastric band slippage or erosion, organ perforation, adhesions and infection. Anaesthetic risks identified by the nurses in this study included: difficulty maintaining an airway, difficult intubation, oxygen desaturation, hypertension and embolism. Study participants identified pain management of patients following bariatric surgery as a post-operative challenge. According to Ide et al., (2008) adipose tissue stores medication and delays medication absorption into the blood stream. Complications such as delayed opioid absorption, combined with the risk of respiratory depression, may assist in understanding the RNs perception of poor pain management in bariatric surgery patients. Direct surgical stimulation of the gastric region results in nausea and vomiting which participants identified as difficult to treat. Continuous vomiting and retching can further increase pain, which in turn raises the risk of bleeding and anastomosis leak due to increased intra-abdominal pressure.

As well as the immediate problems associated with bariatric surgery, the participants commented on the possible long-term issues. However, as the participants mentioned, there is a lack of longitudinal studies on post bariatric surgery patients. Described also, were issues related to: diet and nutrition, social impacts on eating and drinking restrictions, reflux/vomiting and nausea, irreversibility of some bariatric surgeries, possible failure to lose weight and the potential for excess skin following substantial adipose tissue loss. Concerns for patient outcomes among perioperative nurses are not surprising considering their intimate involvement in bariatric procedures, coupled with the lack of follow up they have with patients, unless patients are presenting for further surgical procedures following complications. Study participants also described the possible negative psychosocial impacts of bariatric surgery as: recovery time, expense of the surgery, a possible lack of weight loss, required changes in diet and possible follow-up for inflation/deflation of the gastric band. As patient advocates, all nurses need to be informed and educated on bariatric surgery so they can be empowered to support their patients.

The participants' response to the "Amanda" vignette emphasised the benefits of bariatric surgery are only achieved through post-operative weight loss. However, all participants made some large assumptions in relation to "Amanda's" assumed weight loss which they believed would improve her life and health significantly. In response to the aforementioned risks associated with bariatric surgery, the participants presented the many perceived benefits. These benefits described by the RNs included: reversal of diabetes, hypertension and heart disease and improvements such as: healthier joints, increased fertility and a decreased incidence of emboli.

Considering the clinical focus of surgical and post-surgical care anaesthetic and recovery nurses are involved in, it was noteworthy that the participants described such detailed psychosocial benefits of bariatric surgery for the potential bariatric surgery candidate described in the vignette. Participants predicted "Amanda" would have increased self-esteem, she would feel happier, more attractive, have increased energy to play with her children and exercise and her confidence and mental health would improve. Furthermore, participants promoted bariatric surgery and subsequent presumed weight loss may improve: intimacy with her husband, relationships, coping skills, quality of life and mothering skills. Participants focused on the benefits of Amanda having bariatric surgery as opposed to the burden they described while discussing bariatric surgery in general terms.

5.9 If RNs do experience moral uncertainty; how do they resolve/not resolve this distress?

Results from this study demonstrated participants possessed both moral indifference and moral uncertainty regarding bariatric surgery. Moral indifference was most evident when participants described their own lack of bariatric surgery specific education. This may be attributed to a lack of motivation or avoidance of self-directed learning as a means to avoid forming an educated opinion and thus avoiding responsibility for involvement in the surgery.

Moral uncertainty was portrayed when nurses discussed their views on the informed consent process, obesity stigma, the pros and cons (benefit versus burden debate) of the surgery and equity of access to bariatric surgery. The most obvious area of moral concern was the informed consent process. Considering the responses by the participants, it could be suggested they did not possess a full understanding of the steps to informed consent. Informed consent involves five steps and is considered an ethical and legal process all health professionals should be familiar with. Although nurses in this study were not able to articulate informed consent jargon such as “disclosure”, they nonetheless described concern for it. The participants assumed bariatric surgery patients were not provided with information that fully explained the risks, benefits, alternatives and long-term implications of this surgery. Participants also expressed unease for the psychological and emotional vulnerability of potential bariatric surgery patients when encountering the competence and understanding stages of the informed consent process. Some study participants were of the view that patients did not indicate an understanding of the potential risks, benefits, alternatives and long-term implications of the surgery. This may be explained by a lack of understanding of medical terminology or incompetence to consent by patients, or an absence of disclosure by surgeons and anaesthetists. For study participants, the lack of articulation of the informed consent process could be correlated to the lack of ethics education within nurse education, the workplace or as a part of self-directed learning.

5.10 Benefit versus burden

The benefit versus burden debate in bariatric surgery could be described as the effort to balance the risks and benefits or pros and cons of the anaesthetic and bariatric surgery. Considerations should include: co-morbidities associated with obesity, potential reversal of co-morbidities and long-term implications of the surgery. The

participants in this current study were asked what they believed to be potential benefits and risks of bariatric surgery for Amanda. Responses by the participants may have been indicative of a lack of confidence or education to respond to this question.

5.11 Equity of access

Participants in this current study demonstrated awareness of the existing inequity of access to bariatric surgery. This awareness presented in the form of moral uncertainty and was interpreted by the researcher as the moral concern of equity of access, under the ethical principle of justice, using an ethical framework previously described. This finding may be the result of these particular nurses only engaging in bariatric surgery involving private patients, in the private sector. This perspective is in line with the study by Burkhardt and Nathaniel, (2008).

Research into ethics has indicated moral uncertainty may lead to moral distress. In this case it may involve the patient with obesity co-morbidities participating in bariatric surgery with risks and possible uninformed consent; or as a nurse, not involving oneself in the surgery and therefore possibly facing repercussions, stigmatism and perhaps unemployment. Moral concern was evidenced by the RNs in this current study which has been shown by previous studies may lead to burnout and nurse attrition (McClendon & Buckner, 2007). This possible outcome is not ideal in relation to bariatric surgery nursing care as the demand for this surgery is predicted to increase and hospitals will need to attract, recruit and retain experienced nursing staff. Additionally, employers need to educate staff about the impacts of obesity and bariatric surgery and address the possible ethical concerns nurses may encounter.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.0 Summary

This chapter presents the possible implications for future research in relation to findings from the study. The overarching aim of this study was to explore ethical concerns that perioperative, anaesthetic and recovery room RNs may have in relation to caring for patients in the perioperative phase of bariatric surgery. The findings from the study showed these nurses did express ethical concerns about the surgery and caring for the patients. Ethical concerns included:

- (a) Concern for a lack of bariatric surgery specific nursing and ethics education;
- (b) Concern for inequity of access to bariatric surgery, for those without private health insurance;
- (c) Concern for the immediate and long term risks of bariatric surgery;
- (d) Concern for a lack of longitudinal studies on bariatric surgery patients;
- (e) Concern for the impact on nurses and the healthcare system of bariatric surgery care;
- (f) Concern for obesity stigma in the workplace.

Results demonstrated nurses caring for these patients require education about:

- (a) obesity co-morbidities;
- (b) financial impacts of bariatric surgery on the healthcare system;
- (c) current government health promotion campaigns targeting obesity;
- (d) bariatric surgery procedures;
- (e) risks of surgery and anaesthesia and potential benefits of bariatric surgery;
- (f) nursing care of bariatric surgery patients;
- (g) possible long term implications of the surgery;
- (h) health care ethics surrounding the surgery.

As stated, nurses in this current study demonstrated ethical concerns for aspects of bariatric surgery and education deficits in healthcare ethics. Examples of this knowledge deficit were present in their understanding of the steps to informed consent. The knowledge deficit among participants, coupled with their perception of a lack of

informed consent in bariatric surgery patients contributed to moral indifference and moral uncertainty among participants. Further examples of gaps in ethical education were demonstrated through unfamiliarity with the concept of inequity of access as an ethical concern. In essence, participants were unable to perceive the meaning of inequity of access for the obese low socio-economic status groups who may be in need of bariatric surgery but may be excluded due an absence of private health insurance. Participants were able to vocalize the pros and cons attributed to the surgery and anaesthesia; however, they were unable to identify the benefit versus burden debate as an ethical concern.

6.1 Future educational improvements

The literature demonstrates that as obesity continues to increase, bariatric surgery will increase in parallel, therefore the need for education is paramount. Study results indicate bariatric surgery nursing care education needs to improve if RNs are to provide informed and competent care for bariatric surgery patients in the future. Improving bariatric surgery nurse education will be achieved by firstly: identifying knowledge deficits in bariatric surgery nursing care and health care ethics and secondly: making recommendations for future education. By implementing and increasing nurse education in the area of bariatric surgery patients stand to benefit from the care of knowledgeable, ethically competent nurses who can empower patient autonomy through education. The following paragraph discusses the study design, possible limitations and recommendations for future research.

6.2 Limitations of the study

Acknowledged here are the possible limitations of this present study. Limitations include the small sample size, therefore results cannot be generalised to a wider population. It is acknowledged the researcher, who is an anaesthetic and recovery nurse, was known to some of the participants, thus the responses from participants may have been influenced by their relationship with the researcher.

A purposive, nonprobability sampling technique was used to reach RNs who had expertise in anaesthetics and recovery and were familiar with caring for the bariatric patient. Nonetheless, the researcher had no control over the selection of individual potential participants involved in the study. Sampling in this way cannot guarantee the views expressed by participants are representative of the general population (Borbasi et

al., 2008). Hence, transferability of results may be limited to those RNs working in hospitals in the metropolitan area of WA or to nurses of the same level of experience as the sample group.

Although the use of a vignette in nursing studies is acceptable, one must be mindful that responses may not reflect the actions that would take place in a real clinical situation (Polit et al., 2010). To overcome this, an interview question on the similarity of the vignette to regular clinical situations was included.

The low return rate 28.5% may be indicative of the sensitive nature of the study topic. Nine of 35 potential participants who were sent a flyer agreed to be interviewed; however, saturation of data was reached at seven interviews. This possible reluctance to be interviewed may have been due to a perceived lack of a spare time by theatre nurses, lack of nurses' education of bariatric surgery specific nursing care and obesity knowledge, an indifference of opinion on bariatric surgery or objection to the study's subject matter.

A larger study using a mixed method approach may have elicited a wider perspective on bariatric surgery and caring for these patients. This could have been achieved through the use of a survey (quantitative), to collect data in relation to attitudes toward obesity and bariatric surgery. A survey may have appealed to those who were time poor, not comfortable with an interview situation or the subject matter and those who prefer to remain completely anonymous.

6.3 Future research

Given this present study used an exploratory design implies the expectation it will provide the groundwork for further studies. Further studies will broaden the understanding of the many intricacies associated with this phenomenon, given that more people will access bariatric surgery in the future.

This research identified a paucity of research on bariatric surgery per se, both short term and longitudinal. Further research is urgently required to address the shortcomings of bariatric surgery research. The literature has informed health practitioners that obesity and therefore, bariatric surgery is set to increase. As health professionals, nurses should be ready for this eventuality. Studies from a nursing, medical, patient, dietetic and psychological perspective stand to benefit the general pool of knowledge on bariatric surgery.

Suggested here are topics for future research:

- weight loss outcomes following bariatric surgery;
- preoperative predictors for post bariatric surgery weight loss success or failure;
- physiological changes post bariatric surgery;
- ethical concerns from a range of health professionals and the general public in relation to bariatric surgery;
- the relationship between poverty and obesity;
- the effect of the obesogenic environment;
- psychological impacts of obesity and bariatric surgery;
- education of all RNs involved in bariatric surgery;
- the relationship between inadequately educated RNs and bariatric surgery morbidity and mortality;
- a review of the lack of success of government health campaigns targeting obesity;
- subtypes of obesity according to eating behaviours and psychological diagnosis;
- The effect of bariatric surgery on pregnancy and fertility.

The researcher also sees value in the application of a similar study to the bariatric surgery patient cohort and also to a larger nursing sample. Both applications would greatly improve validation and efficacy of the study results.

As an outcome from this current study's exploration of ethical concerns of bariatric surgery, a review of the informed consent process bariatric surgery patients undertake in terms of competence, disclosure, understanding and voluntariness is recommended.

If future research is able to further highlight and explore the relationship between poverty and obesity and the effect of the obesogenic environment, health care professionals and those responsible for government health campaigns can better improve the effectiveness of anti-obesity health campaigns. An increase in effectiveness of health campaigns may help reduce the incidence of obesity and thus, the need for surgery.

The future of bariatric surgery is one which the researcher hopes will include an integration of health professionals, providing holistic care to maximise positive outcomes and minimise risks for the patient. Such a team might include: a nurse specialist in obesity, surgeon, anaesthetist, dietician, exercise physiologist, psychologist and/or psychiatrist. The use of a team approach would avoid judgements being made unilaterally and result in a best possible patient centered decision (Camden, 2010).

6.4 Implications for nurse education

The literature demonstrates the prevalence of obesity continues to increase, thus bariatric surgery is likely to increase in parallel and therefore, the need for education of nurses and patients is paramount. This study found a need to improve education on bariatric surgery nursing care for current and future nurses and this reflected past research findings (Camden, 2009/2010). Education must begin with current nurses involved in the care of bariatric surgery patients and also be included in the undergraduate nursing perioperative and pathophysiology curriculum. Improving bariatric surgery nurse education will be achieved by firstly, identifying knowledge deficits in bariatric surgery nursing care and health care ethics and secondly, by making recommendations for future education.

Implementation of healthcare ethics education for those nurses who work in high acuity, high stress, and high risk areas is recommended to enable and empower nurses to identify and resolve issues of ethical concern, which may lead to moral distress. This process would aim to increase job satisfaction, patient care and reduce nurse burnout and attrition.

By improving nurse education in the area of bariatric surgery and healthcare ethics, patients stand to benefit from the care of knowledgeable, competent nurses, who can empower patients to make ethically sound decisions.

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APPENDIX 1

ARE YOU INTERESTED IN PARTICIPATING IN A RESEARCH STUDY?

If so, read on –

My name is Casey Lowden and I am currently studying for a Master of Nursing at the University of Notre Dame Australia.



The focus of my research study is the 'globesity' trend; exploring the ethical concerns of Registered Nurses caring for bariatric surgery patients. I am very interested to hear your views on bariatric surgery, since you, as an anaesthetic and/or recovery RN, care for these patients.

This study involves a semi structured interview based on a hypothetical scenario. The interview will take approximately 45 minutes. Participation is voluntary and if you would like to take part, please tick the box below and return this invitation to me using the attached self addressed envelope.

To ensure confidentiality, please do not write your name on this form. I have allocated a code to identify you.

Yes, I would like to participate

APPENDIX 2



Title of study: The “globesity” trend: exploring the ethical concerns of Registered Nurses caring for bariatric surgery patients.

Hello, my name is Casey Lowden and I am undertaking this study as part of my Master of Nursing, through the school of nursing at the University of Notre Dame Australia. Listed below is information about the study.

What is the study about?

Obesity is a global disease increasing in prevalence despite government health campaigns. Some people have chosen to undergo bariatric surgery as a means to lose weight. The aim of this study is to determine, from an Australian perspective, if Registered Nurses (RNs) who care for these patients have any ethical/moral concerns in relation to bariatric surgery. From the data collected the researcher plans to develop an education package for RNs to enhance knowledge about bariatric surgery and obesity and any possible moral concerns.

What do I have to do?

You will be asked to read a short scenario and respond to questions related that scenario. The interview will be audio taped and later transcribed. The interview will last approximately 45 minutes.

Can I refuse to answer the questions?

Yes you can – and you can stop the interview at any time.

Will my identity be protected?

Certainly! Please be assured that the tapes, transcripts and the consent form, which you will be asked to sign prior to the interview, will be kept in a secure cabinet at the University of Notre Dame Australia. To safeguard confidentiality each transcript will be assigned a code. All data collected will be entered onto a password protected computer. Only myself, and my supervisor Dr Catherine Ward will read the transcripts. Any report published from this study will not include any identifiable information.

Who do I contact if I have concerns about the study?

The Human Research Ethics Committee of the University of Notre Dame Australia and Healthcare Australia (A\$EPS) gave approval to conduct this study. If you have any further questions about this study you are welcome to contact the Research Office at The University of Notre Dame Australia Ph: (08)94330964, fax (08)94330544. You can also contact me directly on 0417977015 or email casey_1_lowden@hotmail.com. You can also contact my supervisor, Dr. Catherine Ward on 94332276 or email at catherine.ward@nd.edu.au

Can I see a review of the study?

Yes you can. On completion of the study I can send report to you

Thank you for participating in this study

Casey Louise Lowden

APPENDIX 3



The 'globesity' trend: exploring the ethical concerns of registered nurses caring for bariatric surgery patients

INFORMED CONSENT FORM

I, (*participant's name*) _____ hereby agree to being voluntary participant in the above research project.

- I have read and understood the Information Sheet about this project and any questions have been answered to my satisfaction. I understand that this consent form will be retained by the researcher.
- I understand that I may withdraw from participating in the project at any time without prejudice.
- I understand that all information gathered by the researcher by tape recording and transcript will be treated as strictly confidential, except in instances of legal requirements such as court subpoenas, freedom of information requests, or mandated reporting by some professionals.
- Whilst the research involves small sample sizes I understand that a code will be ascribed to all participants to ensure that the risk of identification is minimised.
- I understand that the protocol adopted by the University Of Notre Dame Australia Human Research Ethics Committee for the protection of privacy will be adhered to and relevant sections of the *Privacy Act* are available at <http://www.nhmrc.gov.au/>
- I agree that any research data gathered for the study may be published provided my name or other identifying information is not disclosed.

PARTICIPANT'S
SIGNATURE:

DATE:

RESEARCHER'S FULL
NAME:

STUDENT: CASEY LOUISE LOWDEN
(SUPERVISOR: DR CATHERINE WARD)

RESEARCHER'S
SIGNATURE:

DATE:

If participants have any complaint regarding the manner in which a research project is conducted, it should be directed to the Research Office at The University of Notre Dame Australia, PO Box 1225 Fremantle WA 6959, phone (08) 9433 0964.