Nurses' Perceptions of their Health Education and Health Promotion Role when Caring for Hospitalised People who have Diabetes Mellitus

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Submitted for the degree of Master of Nursing (Honours)
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March 2004
Declaration

I hereby certify that the work embodied in this thesis is the result of original research and has not been submitted for a higher degree to any other University or Institution.

…………………………..

Robyn Speerin

Date 31st March 2004
ACKNOWLEDGEMENTS

I wish to convey my grateful thanks to the following people without whom this work would not have been completed!

To Associate Professor Patricia Davidson, Dr Anne Bonner, Dr Annette Walker and Dr Julia Thompson for their faith, encouragement and support for me throughout this long journey of discovery. I am truly proud to be associated with these nurses.

To the nurses who gave their time and their stories to help with the understanding of nursing in these difficult times.

My special thanks to Julie Lagudi, who has helped me all along with careful and considerate administrative support.

Also to my many colleagues who, over the years, have participated in the development of the project and also to those who encouraged me to keep on keeping on.

Most importantly to my ever supportive family, especially my Mum, Allison, Craig and Kerrie.
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GLOSSARY OF TERMS

**Acute Myocardial Infarction** – the term used to describe a medical emergency where the flow of blood to a part of the myocardium (heart muscle) is obstructed and the myocardium begins to die due to lack of oxygen and other nutrients supplied by arterial blood.

**Angina** – refers to the sensation or awareness that an individual experiences when the flow of blood to the myocardium is reduced or not meeting demand.

**Bedside nurse** – refers to any nurse who provides direct patient care in the inpatient setting.

**BGL** – refers to blood glucose level. Some of the participant’s statements will refer to BGL or blood glucose level, which refers to the same thing. BGL is used within the context of self-monitoring of diabetes mellitus and is a procedure where capillary blood sampling is achieved through pricking the skin superficially. The fingers are the usual site of this sampling. The level of glucose is measured through placing a sample of the capillary blood onto a special slide and inserted into a monitor used to measure the amount of glucose in the blood sample.

**CAD** – Coronary Artery Disease. CAD is a cardiac condition where the coronary arteries that feed the myocardium have narrowed lumens due to a build up of fatty deposits within their walls. This obstructs the flow of blood to the myocardium that can result in angina and acute myocardial infarction.

**Cardiovascular specialist nurse** – refers to a registered nurse who has had specialist experience and education regarding the nursing care of people with any type of heart disease.
CNS – is a Clinical Nurse Specialist. This category of nurse is a registered nurse who satisfies local criteria that classifies this nurse as working at a specialist level in a particular specialty of nursing. The criteria could include years of experience in a specialty and postgraduate educational training in that specialty and evidence of promotion of the nursing specialty through activities such as nurse education and policy development.

CNE – is a Clinical Nurse Educator. This category of nurse is of the standard as described in CNS but has a focus on nurse education. The nurse is specifically employed to work with all categories of nurses in the clinical context to teach the nurses ways to improve the care that they deliver.

Diabetes Mellitus
Is an endocrine disorder of carbohydrate, protein and fat metabolism. This disorder results in disarray of serum blood glucose and if not managed appropriately leads to vascular and neural diseases. Throughout this study diabetes mellitus is referred to as diabetes.

EN – is an Enrolled Nurse. This category of nurse has successfully completed a course of study approved by the Nurse Registration Board of NSW that allows for the nurse to practice at a basic level of nursing under the supervision of a RN.

Health Education – is a part of health promotion. In the context of the current study the term is used when referring to providing information that if implemented will improve the status of health. Health education may be provided in a formal or informal situation.

Health Promotion – the World Health Organisation describes HEALTH PROMOTION as being multi-factorial and involves the collective efforts of individuals, local communities and governments to improve the holistic health of individuals and communities (WHO, 1986). In the context of the current study the term is used to refer to one of these factors, the provision of information on strategies that may increase self-efficacy and feelings of empowerment to have the skills to improve one’s own health. Health promotion may be provided in an informal or formal situation.
Nurses – when used in this work refers to all the participants of the study in all the categories as described in this *Glossary of Terms*.

Postgraduate Study – refers to formal study undertaken after the successful completion of undergraduate study.

NP – is a Nurse Practitioner. This category of nurse has been authorised by the state nurses’ registration board to practise as a registered nurse with extra privileges such as requesting health investigations and prescribing medication.

RN – is a Registered Nurse. This category of nurse has successfully completed a course of study that has been approved by the Nurses Registration Board of NSW to allow this nurse to practice as a RN within NSW.

Undergraduate Nurse – is a nurse who is currently undertaking a course of study that is approved by the Nurses Registration Board of NSW that leads to registration as a RN if completed successfully.
SYNOPSIS

The aim of the study was to document and explore the perceived role of nurses and their attitudes and beliefs when providing health promotion strategies and health education for hospitalised people who have diabetes mellitus (diabetes). Because nurses are the largest group of health professionals who have the greatest amount of interaction with patients they are in an ideal place to seize the window of opportunity and provide people and their families with the skills for self-management.

As part of the exploratory, descriptive study key steps undertaken included: (1) determining the strategies the nurses currently use to provide health promotion and health education to patients; (2) documenting of the role nurses play in referring people to diabetes educators; and (3) determining the extent to which nurses feel able to fulfil the roles of health promotion and health education. Ajzen and Fishbein's (1980) Theory of Reasoned Action was chosen because of its conceptual congruence with the study aims and the utility to guide the study method and interpretation of the study findings. The study reported in this thesis was conducted in Western Sydney within a socially, culturally and economically diverse population. Study participants were nurses working in medical or surgical wards.

A mixed-methods design was employed in order to: (1) administer an investigator developed questionnaire (n=138; participation rate 42%) to elicit demographic data and information concerning knowledge and beliefs and (2) conduct in depth interviews with a subset of nurses (n=13) in order to validate the questionnaire findings, and more importantly probe and explore nurses attitudes and experience with health promotion and health education in acute care settings.
Study findings identified several limitations in quality care for patients with diabetes in the acute care setting. Significantly, two themes emerged from the qualitative data: *missing the big picture* and *struggling to cope*. Many factors were identified as contributing to these themes and include workload related to high turnover of patients and high acuity of patients; frustrations with patients, carers, managers and administrators. It revealed that many nurses were challenged by a health system that is struggling to meet the demands of increasing acuity, complexity and fiscal constraints. Many nurses in this study believed they were under-prepared for health promotion and health education activities. This belief has significant implications for both undergraduate and postgraduate nursing education and future model of care development.

Encouragingly, there was a minority of nurses, who were the exception, who were *succeeding despite the barriers*. These nurses could effortlessly demonstrate how they provide health promotion and health education strategies despite the barriers identified by the majority. Characteristics that these nurses demonstrated included: an appreciation of issues people living with diabetes experience; a professional commitment to nursing and delivery of comprehensive care; and for some, personal experience of diabetes.

The study reveals that nurses require support from all levels of the healthcare system to enable them to provide this vital nursing care and facilitate self-management. Further, it is apparent from the findings of the study that the nursing profession needs to be more responsible for their own professional development through adoption of a life-long learning philosophy. Additionally, all levels of the healthcare system need to work together to investigate, implement and evaluate new models of care that are responsive to the dynamic state of contemporary health care systems.
Saliently, a nurse who was noted to be *succeeding despite the barriers* noted:

> One of the things I find is that diabetes is a very complex issue for a lot of people, and they have a certain element of denial, and when they have a denial about their condition, they stay within their comfort zone. So we try and get them out of that comfort zone to look at it from a bigger perspective, they don't want to go there.

**A Note About the Format of the Chapters**

Each chapter is presented as a stand-alone report of components of the research. While some repetition may result, I hope that ease of reading is the result. For clarity the quantitative data (Chapter 5), qualitative data (Chapter 6) and mix-method analysis (Chapter 7) are reported separately, but these were concurrent activities.
CHAPTER ONE
Background and Rationale for the Study

Introduction
This chapter provides a contextual basis and rationale for the study described in Chapter Four. The evidence for the burden of diabetes is outlined, along with the motivations of the researcher to conduct this project. Further, this chapter introduces the conceptual issues used in the study to investigate nurses’ perceptions of their attitudes and behaviours relating to health promotion and health education when caring for people with diabetes who are hospitalised. The theoretical framework for the investigation is discussed in greater depth in Chapter Three.

Diabetes Mellitus
Diabetes mellitus (diabetes) is a chronic disease estimated to currently affect almost one million Australians (Australian Institute of Health and Welfare (AIHW), 2002). Many of these people do not know they have diabetes, with growing evidence indicating that for every person diagnosed there is at least another who is unaware of their disease (AIHW, 2002). Dunstan, et al. (2002) report that Australia has one of the highest proportions of people with diabetes when compared to other developed countries. These investigators conclude that this is likely due to undiagnosed glucose intolerance and impaired fasting glucose intolerance. According to the Australian Institute of Health and Welfare (2002) 10,130 people died from either a direct or associated cause of diabetes in 2000. These observations have significant implications for both primary and secondary prevention health care strategies.

Diabetes is a disorder of metabolism, which occurs because of impaired secretion or utilisation of insulin, a hormone secreted by the pancreas (Robertson, 2001). Glucose
is the product of metabolised carbohydrate, protein, and fat, and insulin facilitates its passage into muscle cells, for storage and use (Guyton & Hall, 2000). The causes of diabetes include: genetic predisposition, autoimmune triggers, environmental factors, and behavioural risk factors (AIHW, 2002). Diabetes can also be induced by other factors, for example, drug therapy such as glucocorticoid steroids, beta-blockers, some antipsychotic drugs, and as a result of physiological changes induced by pregnancy (Dawson, et al. 2003; Luna, & Feinglos, 2001). Gestational diabetes usually resolves at the end of the pregnancy but these women are more susceptible to Type 2 diabetes later in their life, particularly if there is a family history or they are obese (Dawson, et al. 2003).

The two major classifications of diabetes are Type 1, previously known as Insulin Dependent Diabetes Mellitus (IDDM) and Type 2, previously known as Non Insulin Dependent Diabetes Mellitus (NIDDM). Type 1 diabetes occurs when the pancreas ceases to produce insulin and the person will require exogenous insulin to maintain normoglycaemia. Type 2 occurs when insulin production is defective, or when insulin is produced but not used effectively. Consequently, the necessary functions of insulin are not maintained. If insulin is produced and not used, a state of hyperinsulinaemia occurs (American Diabetes Association, 2003; Robertson, 2001). The latter is known as *insulin resistance*, where the tissues do not respond to insulin signals. Hyperinsulinaemia, an excess of insulin in the blood stream, results in an increased incidence of thrombotic situations, impaired integrity of the arterial endothelium, and lipid disorders (Kaur, Singh & Sowers, 2002; Penckofer, Schwertz, & Florczak, 2002).

Long-term complications of diabetes are likely when the blood glucose levels are elevated over long periods. Ineffective diabetes control results in heart, kidneys, blood vessels and nerve damage (Brauwald et al. 2003). These complications can be
devastating to the person with diabetes, their family and society broadly (DeCosta, 2003; Shiu, Kwan, & Wong, 2003). While improved nutritional habits and exercise are required to help maintain control in all types of diabetes, Type 2 diabetes can sometimes be managed by these interventions alone, along with the subsequent weight loss (Bernstein, 2002; WHO, 1999). If normoglycaemia is not maintained with these behavioural measures, the use of exogenous insulin and/or oral hypoglycaemic medication may be required (DeWitt & Dugdale, 2003). Oral hypoglycaemics promote normoglycaemia and thus metabolic control by either stimulating insulin secretion, or increasing insulin sensitivity, or by decreasing hepatic production of glucose, while some also help to decrease appetite (Bailes, 2002)

Burden of Diabetes in Australia

Diabetes is estimated to affect 3.8% of the Australian population, with a further significant percentage believed to be susceptible to developing the condition (AIHW, 2002). Dunstan, et al. (2002) confirmed this estimate when they found in an Australian population that 7.4% of their study population (n=11,247) have diabetes. People with diabetes are up to eight times more likely to develop cardiovascular disease than the general population (Grundy, et al. 2002; Kaur, Singh, & Sowers, 2002). The prevalence of Type 2 diabetes, representing up to about 85-90% of all cases of diabetes is increasing due to an ever-increasing propensity for obesity, sedentary life-styles in our society, and the ageing of the population (AIHW, 2002; Dunstan, et al. 2002).

In 1999-2000 12% of Australians aged 25 years or over who have diabetes had a heart attack and 9% had a stroke (AIHW, 2002). In relation to premature mortality, diabetes was responsible for 5.3% of the estimated years of life lost by all causes in Australia (AIHW, 2002). The high rates of complications associated with diabetes, including
renal, retinal and neuropathies result in considerable societal and individual disease burden.

**Diabetes in Western Sydney**

The prevalence of diabetes in western Sydney correlates with the national incidence and there is some suggestion that it may even be higher. The New South Wales (NSW) Health survey conducted in 1997 gave a self-reported incidence of 4.1% in males and 3.9% in females (NSW Health, 1997). These data rendered an overall incidence rate of 3.9%, which would be expected to be increased in 2003. While it is difficult to correctly gauge diabetes incidence due to the alleged under-reporting, data does indicate a steady increase in hospital separations due to a principal diagnosis of coronary heart disease with the co-morbidity of diabetes (AIHW, 2002).

Additionally, western Sydney has a large percentage of indigenous Australians and non-Australian born residents, two groups of people who are known to have a high incidence of diabetes (AIHW, 2003). The official figure for indigenous Australians reached 8,756 at the 2001 Census (1.3% of the total Western Sydney Area Health Service (WSAHS) Census population), although this is widely regarded as an underestimate. Persons younger than 25 years account for 58% of the population. Most (69.6%) of these indigenous people live in the Blacktown area. The section of the Dharruk Land Council Area that falls within WSAHS is reported to cover about 10,000 Aboriginal people. Thirty five percent of the total population in WSAHS were born overseas, compared to 23.4% in NSW overall. Auburn Local Government Area (LGA) had the highest proportion of overseas born residents (56.7%) and Baulkham Hills LGA the lowest (28.9%). The most frequently reported countries of birth for Western Sydney residents born overseas are the UK, Philippines, China, Lebanon, New Zealand, India, Fiji, Hong Kong, Vietnam and Sri Lanka.
Some cultural groups and indigenous Australians have a higher incidence of diabetes because of genetic predisposition (Lillioja, 1996; Simpson, Shaw, & Zimmet, 2003) and also because they adopt a western style of living (AIHW, 2003). Many people living in WSAHS are socio-economically disadvantaged and this has significant implications for cardiovascular disease (CVD) (Hobbs, 2002). The Australian Bureau of Statistics index of relative socio-economic disadvantage (one of five related indexes) ranks the Auburn LGA in the lowest 25% of LGAs nationally. From these two perspectives it can be extrapolated that the real burden of diabetes is probably under reported and a result of the complex interplay of genetic, environmental and social factors (AIHW, 2002b).

**Review of Existing Protocols, Guidelines and Reports**

A number of existing protocols, guidelines and reports were reviewed to assess key issues in diabetes management in Western Sydney and provide a contextual background to the project. Specific protocols that guide nursing care of people with diabetes are not included as the aim was to gain an understanding of the healthcare and community needs of people with diabetes. These included the following documents displayed in Table 1.1 below:

**Table 1.1 Summary of the reviewed existing protocols, guidelines and reports that provide a contextual background to this Study**

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Author/s</th>
<th>Outcomes / Recommendations</th>
</tr>
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</table>
| 1993 | The national action plan: diabetes to the year 2000 and beyond | Diabetes Australia | ▪ Health professionals to be vigilant with diagnosing diabetes as people often do not recognise their disease  
▪ Optimal care must be instigated  
▪ Opportunities to be provided for people with diabetes to understand and self-manage their disease |
<p>| 1996 | The rise and rise of | McCarty, Zimmet, Dalton, | ▪ All health professionals must work diligently on prevention as well as |</p>
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Author/s</th>
<th>Outcomes / Recommendations</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>The strategies must include lifestyle as well as medical therapies</td>
</tr>
<tr>
<td>1996</td>
<td>Principles of care and guidelines for the clinical management of diabetes</td>
<td>NSW Health</td>
<td>Outlines goals of investigation and treatment of diabetes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clearly states 'it is a fundamental right of people with diabetes to have access to information, education and skills acquisition to enable them to participate in the management of their diabetes.' (NSW Health, 1996: p11).</td>
</tr>
<tr>
<td>1996</td>
<td>The burden of diabetes mellitus – prevalence in a cardiac rehabilitation unit</td>
<td>Chen and Boyages</td>
<td>Although a small study with 637 participants:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>One in three women had diabetes</td>
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<td></td>
<td>Those who attended cardiac rehabilitation and had diabetes had poorer ventricular function</td>
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<td></td>
<td></td>
<td>This indicates a higher mortality rate than those without diabetes</td>
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<td></td>
<td></td>
<td></td>
<td>Compelling evidence of the control of diabetes. Need for optimal management.</td>
</tr>
<tr>
<td>1998</td>
<td>Type 2 diabetes – Pulse No. 1</td>
<td>Royal College of Nursing, Australia</td>
<td>The general nurse has a responsibility to be informed about current diabetes management practices</td>
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<td></td>
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<td>The nurse should also take part in client education</td>
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<td></td>
<td></td>
<td></td>
<td>The nurse should assess the patients needs and refer to diabetes educators</td>
</tr>
<tr>
<td>2002</td>
<td>Australia’s Health 2002</td>
<td>Australian Institute of Health and Welfare</td>
<td>Australian’s have one of the world’s longest life expectancy rates due to things like reduced smoking rates and reduced deaths from cancer</td>
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| 2002 | Diabetes: Australian facts 2002                            | Australian Institute of Health and Welfare    | - Diabetes is one of the leading threats to the health of Australians, whether it be Type 1 or Type 2  
- The rates of diabetes in the Australian community are rising and the rates are fed mostly by Type 2 diabetes which is potentially preventable  
- People with diabetes are more prone to certain problems and diseases resulting in disability  
- Diabetes consumes substantial health resources  
- Certain Australians are at greater risk of diabetes |
- Incidence of diabetes higher in this population group – 35% of all people who report having diabetes  
- Increased morbidity and mortality in this population group |

**Motivation to Conduct the Study**

As a nurse with a special interest in cardiovascular health services the researcher comes into daily contact with people who have diabetes. In line with published data many of these people are not self-managing their diabetes optimally (CARE, 2003; Hjelm, Mufunda, Nambozi, & Kemp, 2003). Nurses have numerous opportunities to support people with diabetes to self-manage their disease. A literature review undertaken to inform strategies of improving the care of people with diabetes attending a cardiac rehabilitation program revealed that lifestyle can greatly affect the course of the disease process, including delaying or preventing the debilitating long-term complications (Speerin, 1996). As a result of this review, the researcher was alerted to the importance of promotion of self-management for people who have diabetes.
Providing information to people with diabetes about the disease and its recommended management, allows them to make informed decisions regarding their lifestyle and engage in self-management strategies. Consequently, the researcher developed an interest in how nurses in the hospital setting are able to grasp the window of opportunity for a brief intervention to improve self-management strategies of diabetes.

It is well noted that diabetes is a common co-morbid condition in heart disease (Creager, Luscher, Cosentino, & Beckman, 2003). The researcher’s observations as a specialist cardiac nurse alerted her to the magnitude of the incidence and the health consequences. This observation was subsequently confirmed locally by a study conducted by Chen and Boyages (1996) at a cardiac rehabilitation unit in Western Sydney. Over 16% of attendees of that program in 1995 had diabetes. As a consequence of changes in metabolism, people with diabetes frequently exhibit symptoms associated with cardiovascular disease. These include alterations of blood fats, obesity, hypertension, increased blood viscosity, and poor integrity of the endothelium of blood vessels (Grudy, et al. 2002). These are all major risk factors for coronary artery disease (CAD) and acute coronary events (Creager, et al. 2003). These risks, nevertheless, can all be decreased with good diabetes management (Kaur, Singh, & Sowers, 2002).

Nurses, as the largest group of health professionals who spend time with hospitalised people, are in a prime position to impress upon those affected by diabetes, ways in which they can maintain the recommended lifestyle (Donaldson, Rutledge, & Pravikoff, 2000; El-Deirawi, & Zuraikat, 2001; Uding, Jackson, & Hart, 2002). Education by nurses about the substantial benefits of lifestyle management can help create a partnership of care by assisting people with diabetes to take control of their disease.
management, and thus promote concordance with treatment recommendations (Callaghan & Williams, 1994; Hjelm, et al. 2003).

Consequently, basic education and possible referral to specialist patient educators by the ‘bedside nurse’ are vital in helping individuals with diabetes to initiate, maintain and update their awareness of the value of these disease management strategies. At the commencement of this study, data from the Westmead Hospital's Diabetes Education Centre confirmed that referral numbers to their services were less than optimal, when compared to the admission diagnostic data (Diabetes and Endocrinology Ambulatory Care Centre, 1996). Therefore, an additional motivation to conduct this study was to identify reasons responsible for the low referral rates to these programs. Given the increasing burden of diabetes and cardiovascular disease it was considered that this was a timely study to inform nursing practice.

**Nurses’ Role in Diabetes Education**

The prevalence of diabetes is well established, in particular as a co-morbid condition (Linekin, 2001). Nurses in all settings will therefore care for many people with diabetes in their day-to-day work. While many studies, and indeed nurses themselves, discuss the importance of nurses playing an active role in diabetes education, there is a plethora of evidence that indicates that the role is not undertaken appropriately (Callaghan, 1994; El-Deirawi, & Zuraikat, 2001; Hjelm, et al. 2003; Uding, et al. 2002). Reasons identified by nurses include a variety of issues such as the patients’ lack of understanding and lack of desire to understand, the nurses’ workloads, and lack of confidence by the nurses (McDonald, Tilley & Havstad, 1999). In addition, previous nursing research has revealed that nurses’ understanding of diabetes is not at a desirable level to provide this care (Baxley, Brown, Pokorny & Swanson, 1997; El-Deirawi & Zuraikat, 2001).
Politi and Trofino (2003) sum up the importance of this basic nursing care responsibility:

*Education is the cornerstone of nursing, regardless of setting. Many hospitalised patients have a secondary diagnosis of diabetes, and all of them, whether their knowledge of diabetes is extensive or minimal, can benefit from education. Simply by initiating a brief discussion about the disorder, a nurse can help patients avert related complications.* (p.64)

While the researcher acknowledges the models and processes of health education as being multifactorial, as discussed in Chapter Three, in the context of the current study health education refers to the provision of basic diabetes health information (such as brief discussion about their medication regime, home blood glucose monitoring, and dietary habits) and assessment of the need for referral of patients for diabetes education (Cotterell, 2000). The researcher acknowledges the nurses’ workload and knowledge base often does not allow for more than these brief interventions to occur in the clinical setting. The study aims to document nurses’ attitudes to health promotion and health education and determine if nurses in general inpatient ward settings have the skill and confidence to provide basic diabetes information and to the extent to which they are performing this role.

**Theoretical Framework**

The theoretical framework to guide this study is Ajzen and Fishbein’s Theory of Reasoned Action, which describes attitudes and their relationship to behaviour (Ajzen & Fishbein, 1980). On the basis of the theory nurses who exhibit positive attitudes to diabetes health care will follow-through with positive behaviours when caring for people
with diabetes. The choice of the theory to guide the study was made following review of key behavioural theories and models including the Social Learning theory (Bandura, 1977), Bandura's subsequent Social Cognitive theory (Bandura, 1985), the Health Belief model (Becker, 1974), Adult Learning theory (Knowles, 1990), the Stages of Change model, also known as the Transtheoretical Model of Change (Prochaska, & DiClemente, 1992; Prochaska, 1997; Prochaska, et al. 2001), the Roy Adaptation model (Roy, 1997), and Health Locus of Control (Rotter, 1966, cited in Gillibrand & Flynn, 2001). The Theory of Reasoned Action was chosen because it aligned with the research goals of not only wanting to document attitudes but also behaviours of nurses when caring for people who are hospitalised and have diabetes. The theory gives a plausible reason for actions on the basis of attitudes. Detailed explanation of premises of this theory and rationale as the theoretical framework are discussed in greater depth in Chapter Three.

**Significance of the Study**

Encouragingly, Type 2 diabetes is a largely preventable condition (Hjelm, et al. 2003). This fact underscores the importance of both primary and secondary prevention strategies. Left unchecked, the long-term complications of poorly managed diabetes can have a devastating effect on the lives of individuals and their families, as well as placing enormous burdens on the society (Dunstan, et al. 2002). As noted during discussion on the researcher’s motivation to conduct the study (p.25), nurses have ready access to hospitalised people and are therefore in an excellent position to provide opportunistic health promotion information and health education. If all nurses embraced the opportunity for health education and promotion with people who have diabetes it is likely to enhance the individual’s potential for self-management and improvement in health outcomes. In light of existing evidence that nurses do not
embrace these opportunities (Callaghan, 1994; El-Deirawi, & Zuraikat, 2001; Hjelm, et al. 2003; Uding, et al. 2002) the study has the potential to increase understanding of nurses’ ability and potential to embrace the health promotion and health education roles.

**Justification of the Study Approach**

The critical literature review described in Chapter Two supports the researcher’s anecdotal evidence that nurses do not provide this vital role. Research to date is limited to describing nurses’ attitudes toward people with diabetes, rather than attempting to describe the actual behaviours of nurses (Anderson, Donnelly, Dedrick, & Gressard, 1991; King, Shute, & Lehmann, 1996; McDonald, Tilley, & Havstad, 1999; Shute, King, & Lehmann, 1997). A triangulated methodological approach using both qualitative and quantitative data was considered to be the most effective method to determine attitudes and behaviours of nurses. The reason is that it was desirable to ascertain the attitudes and beliefs of a large sample of nurses through a questionnaire and then further explore the attitudes and behaviours through in-depth interviews. Triangulation of data and then subsequent comparison of the findings was used to further substantiate the questionnaire findings and provide further explanation for these attitudes and behaviours. Further, the qualitative data provided a greater insight into the day-to-day work of nurses and explanations of the barriers and facilitators of health promotion and health education of people with diabetes. It was considered that the descriptive, exploratory methodology of this study would provide rich data to inform the development of nursing interventions and educational programs. (Bechtel, Davidhizar, & Bunting, 2000; Begley, 1996; Morse, 1994; Polit & Hungler, 1995; Roberts & Taylor, 1998; Shih, 1998; Thurmond, 2001). Further, it was considered that this method was the most efficacious in elucidating key factors that enable or hinder health promotion
and health education in the acute hospital setting. In the next chapter the literature review informing the study design is discussed.
CHAPTER TWO

Literature Review

Introduction

Chapter One has provided an overview of key issues in diabetes management and some of the published studies to address the difficulties that people with diabetes experience. This chapter describes the literature review undertaken to provide the background for the study. Five discrete but interrelated foci were investigated for the literature review to inform the study development: (1) theoretical models of attitudes and behaviours relating to health behaviours; (2) studies of health professional’s attitudes to diabetes; (3) nurses’ attitudes to diabetes; (4) health promotion as a role of the professional nurse; (5) barriers and facilitators to nurses providing care for people with diabetes; and (6) the importance of the education of nurses.

1. Attitudes and Behaviours

Understanding what the motivation is behind a particular behaviour will undoubtedly help in planning health education and health promotion strategies. Theoretical frameworks have been developed to describe how attitude can influence behaviour. Fishbein and Ajzen (1975) and Rotter in 1966 (as cited in Gillibrand & Flynn, 2001) have developed sound conceptual relationships between attitudes and behaviours.

Fishbein and Ajzen’s initial Theory of Reasoned Action, which was further refined in 1980 (Ajzen & Fishbein, 1980) states that attitudes can influence behaviour, either in a positive or negative way. Furthermore, attitudes can be derived from two sources, either personal in nature or developed from the social context. According to Fishbein and Ajzen, an individual’s personal nature can influence behaviour either positively or negatively behaviour, whereas social influences are characterised by what the
individual believes the world at large expects of him or her. The individual will weight personal and social beliefs and attitudes and the attitude that carries the most weight will be acted out in behaviour. According to the theory, if the person believes a positive outcome will result from certain behaviour, then the person is more likely to perform that behaviour. Thus it is important that the attitudes of social groups be positive as well as the personal attitudes. Application of this theory in the healthcare setting should then bring about better health practices by those who seek our care. It could thus be hypothesised that the provision of basic, on-the-spot, diabetes education from a health professional who has a positive attitude to good health practices, to patients with diabetes could produce positive behaviours in that patient (Cotterell, 2000). The powerful force of socialisation in nursing makes this theoretical framework of particular use in exploring and describing attitudes and behaviours (Kneafsey, 2000).

Self-positive attitude is also a determinant of success in what is referred to as locus of control, developed by Rotter in 1966 (as cited in Gillibrand & Flynn, 2001). Locus of control has three aspects; internal, external, and the influence of powerful others (Gillibrand & Flynn, 2001). Internal locus of control is associated with self-confidence, which is usually a natural trait, and external locus of control is that sought from outside sources. People with internal locus of control tend to assume self-control, whereas those with external locus of control believe that control of their life is determined by outside forces or ‘powerful other’ and circumstances such as socio-economic status and legal pressures (Callaghan, 1998). Thus it is postulated that people who have internal locus of control will take self-control, and with information provided, are more likely to take on better health practices (Gillibrand & Flynn, 2001). Conversely, those with external locus of control will rely on health services to assist them to maintain better health practices. Internal locus of control can be promoted by education as
demonstrated by Bergman, and Bertero (2001). Bergman and Bertero demonstrated a positive relationship between education and internal locus of control in their interpretive study of people with coronary heart disease, trying to understand how it impacts upon their life. They found that this theory well aligned with what their participants experienced. However, Bergman and Bertero also found that the impact of social situations is very powerful, as postulated by Rotter’s theory. As a result of Bergman and Bertero’s findings they recommended that public education of better health practices, to deter diseases like coronary artery disease (CAD) and diabetes, needs to be maintained so that those suffering the diseases don’t feel so isolated in their efforts.

Both these theories attest to the contribution of attitudes and behaviours in supporting people to maintain healthy lifestyles and these and others will be considered in greater depth in Chapter Three.

2. Health Professional’s Attitudes towards Diabetes

The National Diabetes Commission in America had anecdotally reported observing inappropriate attitudes of healthcare professionals towards diabetes management as far back as 1977 (cited in Anderson, Donnelly, Dedrick & Gressard, 1989). In efforts to scientifically prove or disprove this, Anderson, et al. (1989) consequently devised a scale, the Diabetes Attitude Scale (DAS), to test attitudes of health professionals. This scale was revised in 1990 and reported by Anderson, Donnelly, Dedrick and Gressard (1991). In this report Anderson et al. suggest that attitude and behaviour are closely related and that to ask health professionals about their attitudes to certain topics, they are actually giving an indication of their behaviour. These observations are consistent with Fishbein and Ajzen’s (1975) Theory of Reasoned Action. Anderson, et al. (1991) have conducted previous research into the attitude of nurses, dietitians and physicians...
towards blood glucose monitoring (BGL) and the attitude they have to promotion of the practice to the person with diabetes. When the clinician believes that normoglycaemia is important in preventing or delaying long-term complications, he/she displays a positive attitude towards BGL monitoring. Consequently, the person with diabetes is more likely to practice regular monitoring. Of note from this same study, Anderson, et al. (1991) found that non-specialist healthcare workers, including nurses, did not rate highly in their attitudes to the management of diabetes, particularly Type 2. According to the Theory of Reasoned Action this would mean that the receivers of these healthcare workers care would not obtain the correct messages and thus the spiral of the diabetes disease process can proliferate unabated.

Although the DAS is useful in that it seeks the attitudes of healthcare workers and patients alike, and has been validated, it was not used in the current study for two reasons. Firstly, the DAS does not address nurses’ reported behaviours but rather relies on the Theory of Reasoned Action to assume their behaviours, and secondly it has been reported by Australian researchers using a modified version of the DAS to be problematic. King (M. King, personal communication, September, 1997) found that it was too long, too wordy, and too repetitive. It was for these reasons that a questionnaire to meet the needs of this project was developed (see Appendix 4). The development of this questionnaire is described in Chapter Five.

3. Nurse’s Attitudes to Diabetes
At the time of the development of the study proposal there was a limited amount of literature related to the generalist nurse’s role in the provision of health promotion and health education of patients with diabetes (Dunning, 1995; King, Shute & Lehmann, 1996; Shute, King & Lehmann, 1997; Swartz & Davis; 1994), and no previous literature
was identified that explicitly explored the attitudes and behaviours of nurses towards people with diabetes.

Swartz and Davis (1994) describe a health promotion program that was established to encourage staff nurses to educate diabetic patients in a cardiac ward of an American hospital. The aim of the program was to heighten the nurses’ awareness of the potential benefits of better diabetes management for patients. If the nurses had a better understanding they could in turn pass on these messages to patients in a positive manner. Swartz & Davis (1994) evaluated the knowledge of nurses and patients following their intervention and this revealed that the program was effective in increasing both nurses and patients understanding of better health practices. The outcomes revealed that knowledge, attitudes and behaviour of the nurses in relation to diabetes management was improved by further education.

Another project was reported by Dunning in 1995. Dunning described the development of a manual to guide nurses in the care of people with diabetes. Dunning developed the manual because she identified the importance of appropriate nursing care of people with diabetes and an apparent lack of documented nursing care. However, the attitudes and behaviours of nurses was not a feature of this project.

Since 1998 when this research proposal was developed there has been a proliferation of publications internationally on ways nurse researchers have tried to address the problem. Significant publications include Cotterell (2000), McDonald, et al. (1999); El-Deirawi and Zuraikat (2001), Hjelm, et al. (2003), Uding, et al. (2002). With the exception of McDonald, et al. (1999), all of these studies address the educational needs of nurses. McDonald, et al. (1999) asked nurses, through a specifically developed questionnaire, what they believed were the problems encountered by
patients and their families in diabetes management and then to offer some solutions. In this study attitudes and behaviours of nurses’ was not the focus of investigation, rather the patients and their families.

In 1996 and 1997, research was conducted with Australian undergraduate and postgraduate nurses (King, et al. 1996; Shute, et al. 1997). This research sought to determine if further education and nursing experience affected nurses’ attitudes to the seriousness of diabetes. These studies found that as nurses progressed through an undergraduate program that had a focus on provision of positive attitudes to healthcare, their attitudes were more appropriate than they were at entry to the program of study. While it is noted these authors have over-rated some aspects in the report of the 1996 study, such as the estimates of the undergraduate’s exposure to diabetes education in their comprehensive nursing degree, the results of these two Adelaide studies report that the attitude of nurses to diabetes is more positive with increased education (King, et al. 1996; Shute, et al. 1997). According to the findings of these studies it could be assumed then that if Ajzen and Fishbein’s (1980) Theory of Reasoned Action is correct then the behaviours of these nurses would also be more positive because of this nursing education program. No studies were identified that explored the relationships between nurses’ attitudes and their subsequent behaviours in relation to health promotion and health education in diabetes. However, Nash, Edwards & Nebauer (1993) studied the effect of attitudes, subjective norms and perceived control on nurses’ intention to assess patients’ pain. These investigators found that the Theory of Reasoned Action was useful in investigating the relationship between attitudes, intent and action.
4. Health Promotion as a Role of the Professional Nurse

Health promotion is a multifactorial concept and has caused some confusion in nursing as to what is the real definition (Whitehead, 2001). Whitehead (2003) argues that many nurses’ health promotion practices are governed by biomedically determined criteria and functioning within a narrow biomedical model. The World Health Organisation gave a concise definition in 1986 in the Ottawa Charter of Health Promotion. This document describes health promotion as “the process of enabling people to increase control over and to improve their health” (WHO, 1986).

Within this framework it is recognised then that health promotion activities can involve several components such as health education of disease and its management as well as general health information (Whitehead, 2001). However, Whitehead (2001) debates that there are other considerations to be made rather than just providing facts. For health promotion to be effective, rather than just didactic information, the nurse needs to consider behavioural and social psychology theory as well as incorporating evaluation as a critical element of program development (Whitehead 2001; 2003). Despite debate surrounding definitions it can be deduced that health education is one part of the whole concept that helps people to consider making informed choices to enhance their health, with or without disease. Various models have been developed to incorporate these multifactorial concepts including Green, Kreuter, Deeds and Partridge’s PRECEDE model (1980) and the Health Belief Model (Becker, 1974). Green et al.’s model is depicted in Figure 1.1 and illustrates how health promotion and education is better planned by ‘diagnosing’ the individual person’s situation from a variety of relevant perspectives and then considering the desired outcomes before planning or implementing the intervention. Of significance for nursing practice, education and research, is that the patient and the health care system interact within complex systems influenced by social, political and economic factors (Davidson, et al.
Considering this complexity, Green et al.’s model, even though it is now almost 25 years old, is still readily applicable as a model to understand health systems. The model considers the social, epidemiological and behavioural factors and importantly that health and health outcomes are not solely related to biomedical factors.

According to Green, et al. (1980, p.7) health education is "…any combination of learning experiences designed to facilitate voluntary adaptations of behaviour conducive to health." Therefore multiple strategies should be used with the aim to increase knowledge, encourage positive attitudes and thus acceptable behaviours, and to allow for individual learning styles.

There are a variety of theories and models reported in the literature on how to deliver health education including Knowles’ theory of adult education (Knowles, 1990). Knowles recognises that adults learn in different ways from children. Adults need to be given reasons why doing something is better than another and Green, et al.’s. (1980) model uses these concepts. The model involves planning and implementing a health education program using a process they refer to as PRECEDE (Green, et al. 1980, p11). PRECEDE is an acronym for predisposing, reinforcing, and enabling causes in educational diagnosis and evaluation. Figure 1.1 outlines the steps of the PRECEDE model. Green et al. identify it is useful to use this model because it achieves the goals of increasing efficacy and conserving resources, informs the consumer, evaluates the results, and enhances a sense of purpose in providing the health education. While the PRECEDE model is worthy of consideration in a health promotion context it is not possible for the nurses who work in the inpatient setting to utilise in it’s entirety but the model does provide a solid framework to help nurses understand the concepts of adult learning.
Health promotion and health education are a vital component of nurses’ work (El-Deirawi, & Zuraikat, 2001; Hjelm, et al. 2003; Royal College of Nursing, Australia, 1998) and according to the recent review of nurse education in Australia it is a core component of what nursing work is about (Heath, 2002). Nursing care encompasses caring for people from a holistic perspective and integral to this is the psychosocial reaction to disease (Narayanasamy, 2003; Schaefer, 2003). Understanding of their disease process however, is the first step for people to accept and live a satisfying life with disease, and to make attempts to achieve wellbeing and limit disease progression through recommended management strategies (Parchman, Pugh, Hitchcock, & Larne, 2002). Diabetes care clearly aligns with these desired outcomes. Nurses can help people understand these concepts either through their own knowledge base or through referring patients to appropriate resources, in this case diabetes educators.
Worldwide trends to reduce length of stay in acute health care facilities have resulted in decreased opportunities for health professional and patient interaction within traditional frameworks of inpatient education and information sessions (El-Deirawi & Zuraikat, 2001; Moriarty, and Stephens, 1990; Ruzicki, 1989; Uding, et al. 2002). Paradoxically, in the past decade there has also been a greater interest in promoting patient education, healthy lifestyles, and self-management strategies as a model across the health care spectrum (Hjelm, et al. 2003; NSW Health 2003; Trocino, Byers & Peach, 1997).

Within this context, the nurses' role in health promotion strategies has become increasingly more important (Gonsar & McGuiness, 2001; Hjelm, et al. 2003). To support this stance, professional nursing groups have released position statements on the role, which have further substantiated health promotion and patient education as a vital nursing role (International Council of Nursing, 2000; Royal College of Nursing, Australia, 1999). As discussed in Chapter One, nurses, of all health professionals in the inpatient setting, spend the most amount of time with hospitalised people (El-Deirawi & Zuraikat, 2001). They are therefore in a prime position to impress upon those affected by diabetes, ways in which they can maintain the recommended lifestyle. Thus nurses should not place any less importance on the role of health promotion than other nursing duties (Cotterell, 2000; El-Deirawi, & Zuraikat, 2001; McDonald, et al. 1999; Whitehead, 2003b). The level of importance and emphasis placed upon diabetes management by health professionals, in particular nurses, will likely influence the knowledge and behaviours of patients and their families.
5. **Barriers and Facilitators to Nurses Providing Care for People with Diabetes**

The nursing literature is replete with reasons why nurses may not engage in health promotion and health education activities in the inpatient setting. This lack of engagement may be related to time pressures and or a perception of lack of knowledge and skills (McDonald, et al. 1999; Uding, et al. 2002). The role of education on all levels, undergraduate, post-graduate and professionally based education has a significant potential to inform and direct nursing practice (Heath, 2002). Nursing literature suggests that nurse education programs have a positive effect in helping nurses become more confident in providing health promotion and health education. Recently, Uding, et al. (2002), who suspected that nurses’ knowledge of diabetes was not at an acceptable level to deliver health promotion and health education to people with diabetes, sought to see if this was in fact true. These nurse researchers tested a group of 72 nurses on their baseline knowledge of diabetes care. They then delivered a forty-five minute presentation on contemporary diabetes understanding and management to half of their group of nurses, while the other half left the room. Following this presentation all the nurses completed the knowledge questionnaire again, and they found that a simple exercise like this can significantly increase nurses understanding of diabetes. However, they did not proceed to see if this new knowledge was retained or had an affect on delivery of nursing care.

Trocino, et al. (1997) noted that, although patient and family education is a basic nursing responsibility, the outcomes have been less than desirable. Trocino, et al. (1997) and others suggest that the reason is a multi-factorial problem and reasons may include poor preparation in undergraduate programs particularly from the perspective of health promotion strategies (Hjelm, et al. 2003; Liimatainen, Poskiparta, Karhila, & Sjogren, 2001), lack of confidence to impart knowledge (Uding, et al. 2002), lack of
motivation (Burke, 2003), or lack of time (Rausch, & Turkoski, 1999). Similarly, previous Australian studies (Donoghue, Duffield, Pelletier & Adams, 1990; Higgins, 1991) have identified a lack of preparation in and a decline in the importance of health promotion and health education as a nursing role by graduating nurses. However, these studies have been heeded, with tertiary education centres taking up the challenge to improve the situation (Wass & Backhouse, 1996). Additionally, Pelletier, Donoghue, & Duffield (2003) are conducting a ten year longitudinal study to determine if post-graduate nurse education is adequately preparing nurses for all their nursing roles. The latest results of this study indicate that the participants do not believe the post-graduate education they received has had an impact on their ‘teaching and motivating of patients’ (Pelletier, et al. 2003, p. 438). While these researchers give reasons for why nurses may believe their further education has not impacted on their practice, such as the nurses believing they were practicing health promotion strategies at a high level prior to the post-graduate study, the concern remains that health promotion and health education is not happening as everyday nursing practice.

6. The Importance of Education of Nurses

On the basis of the literature review it is evident that a multifaceted approach that addresses systems, processes and individual health professional and patient needs is necessary to achieve improvement in the care of patients with diabetes. Significant challenges exist for all health professionals in the context of changes in the education system and in many instances professional isolation. (Dunning, Brown, Phillips, & Ayers, 1994; Higgs & Edwards, 2002).

Education has been identified as a critical factor in promoting diabetes education not only for patients but health professionals also Cotterell (2000), Hjelm, et al. (2003) concluded that nurses need more focus on health promotion in their education
programs to gain the confidence to impart valuable knowledge and also skills in delivering health promotion strategies. El-Deirawi and Zuraikat (2001) also found that more focus on education about diabetes will increase the nurses’ activity in discussing diabetes with patients, and Cotterell (2000) stress’ the importance of the nurse-patient interaction in optimising diabetes management. It is critical to use each and every opportunity to determine the skills and information a person with diabetes needs prior to discharge. Cotterell states that failure to seize every opportunity to discuss self-management of diabetes means that many people with diabetes are often ‘lost’ to further education. She states that the ‘bedside’ nurse can be one of the vital links to important outpatient and support services.

Beyond the scope of this literature review is a plethora of factors that impact on the working day of the nurse and thus their ability to perform activities related to health promotion and health education. These factors include increasing demands on health care systems as a result of the ageing population, increased patient acuity, cultural diversity and the increasing burden of chronic disease (Brookes, Davidson, Daly & Hancock, 2004; Davidson, Meleis, Daly & Douglas, 2003; WHO, 2002).

Conclusions
In summary, this literature review has revealed that promotion of self-care and diabetes education is vital to assist people to live a better life with diabetes. The importance of management of diabetes as a chronic disease requires consideration of strategic systems and processes to address not only the needs of patients but designs of health care systems as well (Davidson, Halcomb, Hickman & Graham, 2004). Nurses, as the largest group of health professionals interacting with people with diabetes and their families are in an ideal position to both provide information and behavioural change strategies and to refer patients to specialist educators.
The review also highlights that ‘bedside nurses’ need further assistance in gaining the necessary skills, knowledge and confidence to be able to provide basic health promotion and health education. It can be concluded from this eclectic literature review that, if nurses’ attitudes to diabetes education and their confidence in imparting information is increased, it is likely that they will be able to influence the person with diabetes to consider better health practices. It was on the basis of these observations that the study was designed.

Further, the literature reviewed indicates that the study described in the following chapters is warranted to determine the extent to which bedside nurses feel able to fulfil their roles in assessing and referring patients with diabetes for diabetes education in contemporary health care systems. It is important that we know more about nurse’s attitudes and their subsequent behaviours and the reasons for not engaging in these activities more frequently in order to facilitate improvement. Due to both these omissions in the literature reviewed, the researcher will seek to determine nurse’s attitudes and their subsequent behaviours when nursing people with diabetes who are hospitalised, particularly in the context of the acute care environment of the Australian health care system. Systematic documentation of nurse’s attitudes and beliefs will also be useful to develop and implement interventions to improve outcomes of patients with diabetes. Chapter Three will describe the rationale and justification for the choice of the theoretical framework for the study.
CHAPTER THREE
Theoretical Framework

Introduction
In this chapter, the utility of a theoretical framework to enhance the research process, and an overview of key behavioural theories informing debate and the study design, will be discussed in relation to their suitability to answer the research question. After weighting of the strengths and limitations of theoretical perspectives discussed below, Fishbein and Ajzen’s Theory of Reasoned Action (1975) was chosen as the guiding theoretical framework for the study design and interpretation of study findings.

As many of the behaviour theories are called models an effort was made to try and define what the terms model and theory mean within the context of nursing research to minimise ambiguity. It is apparent that semantically, many issues surround the use of these terms. Roberts and Taylor (1998) suggest they are interchangeable, and define a theory as “…an attempt to describe, organise, or explain a phenomenon or group of phenomenon of a discipline, in language that is appropriate to the discipline” (p.62).

A model is a component of a theory, and in the context of language, rather than a physical model e.g. a model aeroplane, is referred to as a conceptual or a theoretical model (Robert & Taylor, 1998). Some behavioural theorists use the words model and theory interchangeably within this context (Bandura, 2001; Prochaska & Velicer, 1997). An example is the Transtheoretical Model of Health Behaviour Change (Prochaska & Velicer, 1997). While the Prochaska and Velicer use the word model regarding their work, they discuss and hypothesise in an organised way that explains the phenomenon of behaviour change.
In efforts to reduce confusion, this chapter will use the words *theory* and *model* in the context in which the original authors have used the terms in their work.

**Framework to Guide a Research Process**

Theoretical or conceptual frameworks are commonly used within the research process in an attempt to describe, organise, or explain an expected relationship between variables (Roberts & Taylor, 2002). They are used in all steps of the research process, so the framework chosen must suit the research question, the variables, the methodology, data analysis and the interpretation of the findings (Roberts & Taylor, 2002). A framework also places the findings of research contextually within an existing body of knowledge.

Just as the terms *theory* and *model*, *theoretical* and *conceptual* frameworks are used interchangeable in the literature (Wotton, in Greenwood, 2000). According to Brink and Wood (1994) a theoretical framework is used in a research study when there is evidence in the literature that the research variables are considered to be related, and the intention of the study is to confirm or refute the relationship. The theoretical framework is able to make predictions about particular phenomena because the variables have previously been shown to be inter-related (LoBiondo-Wood & Haber, 1998). Conversely, a conceptual framework is used when the literature reveals some research about the variables but no particular theory to explain the relationship between the variables. LoBiondo-Woods and Haber (1998) liken the relationship to an ‘architectural blueprint’ (p.140). Some concepts fit together because of their common relatedness to a phenomenon. If a relationship between the concepts are identified then a theory is generated, which can be tested in further studies (LoBiondo-Woods & Haber, 1998).
Despite the differences in the way the terms are used, a conceptual or theoretical framework is used to help guide all the processes of a research project by giving some understanding of the research variables, and their relationship to each other. Conceptual or theoretical frameworks help the researcher decide how to investigate the problem, sift through and sort the data, and to guide discussion. LoBiondo-Wood and Haber (1998) explain the framework as being similar to a road map because it guides the researcher through the research process. Having some understanding of the concepts being investigated helps the researcher decide how to study the phenomenon and then how to group or to analyse the data. Thus it is important to select a theory that aligns with the research problem and the variables. If a theory cannot be found that aligns with the research problem then theory generation may need to be a part of the research process as discussed above.

**Determining the Framework for the Current Study**

The literature review generated several possible frameworks that could be used when deciding on the study design. Nurses’ attitudes, their knowledge regarding diabetes, and their provision of health promotion and health education when nursing people with diabetes, has been studied previously (Banks, & Logsdon, 1994; Baxley, Brown, Pokorny & Swanson, 1997; El-Deirawi, & Zuraikat, 2001; King, Shute & Lehmann, 1996; McDonald, Tilley & Havstaaad, 1999; Moriarty & Stephens, 1990; Uding, et al. 2002). However, these studies do not sufficiently describe the behaviour of nurses when they perform health promotion and health education functions. Theoretical propositions that could be used to assist nurses provide health promotion and health education activities are described below.

Key theoretical propositions informing health promotion and health education activities include:
• Social Learning theory (Bandura, 1977)
• Social Cognitive theory (Bandura, 1985)
• Health Belief model (Becker, 1974)
• Theory of Adult Learning (Knowles, 1990)
• Stages of Change model, also known as the Transtheoretical Model of Change (Prochaska, & DiClemente, 1992; Prochaska, 1997; Prochaska, et al. 2001)
• Roy Adaptation model (Roy, 1997)
• Health Locus of Control (Rotter, 1966 as cited in Gillibrand & Flynn, 2001)
• Fishbein and Ajzen’s Theory of Reasoned Action (1975)

All of these theories suggest that factors affecting behaviour are complex and multifaceted. These theories purport that people behave in a certain way because they believe certain behaviours will produce benefits that they aspire to achieve (Woodward & Berry, 2001). Therefore, in order to encourage people to behave in a way likely to improve their health they need to be shown how to identify, monitor and value the long-term outcomes of a particular behaviour. The manner in which the behaviour change is to be achieved is derived from the theory chosen. Similarly, factors such as having an external locus of control (Younger, Marsh & Grap, 1995), self-care deficits, and a personal belief that an individual is incapable of helping themselves (Bandura, 1982) can impact on the ability of an individual to change behaviours. Locus of control relates to the degree to which individuals perceives that they have control over given situations (internal) or whether they perceive it lies beyond their control (external) (Callaghan, 1998; Gillibrand & Flynn, 2001).
The Social Cognitive theory, developed by Bandura from his theory of Social Learning, refers to an individual’s self-efficacy or their belief in their ability to perform a task or behaviour, and their belief that the particular outcomes of the task or behaviour will confer benefits (Bandura, 1997; Dougherty, Johnson-Crowley, Lewis, & Thompson, 2001). Self-confidence evolves from four elements; (1) ability to perform (2) others’ belief in an individual’s ability to perform successfully; (3) others’ influence and social support; and (4) physical feeling of well-being from successfully performing the task (Allen, 1996; Dougherty, Johnson-Crowley, Lewis, & Thompson, 2001).

A second theory to explain behavioural change is the Health Belief model (Becker, 1974). The Health Belief model describes how individuals’ behavioural adaptation is motivated by the belief that a particular behaviour will produce positive health gains, thereby warding off health threats. The motivation for behavioural change is embedded in the belief that they are at risk of acquiring or developing a disease, which is a major threat to either their physical and psychosocial well-being or both (Finfgeld, Wongvatunyu, Conn, Grando & Russell, 2003; Woodward & Berry, 2001). Additionally, the individual’s behaviour change is influenced by two practical considerations. First, the belief that the treatments or activities are not costly in terms of money, time and effort; and second that they are exposed to an impetus that may influence their decision (Elder, Ayala, Harris, 1999). Examples of impetus’ that may influence their decision include having a close associate or relative who has suffered the result of ineffective behaviours, or a media campaign that highlighted the problem.

A third theory that was reviewed and considered as a possible guide the proposed research was Knowles’ (1984) theory of adult learning (or andragogy), which was inspired by Knowles’ career in tertiary education. Andragogy refers to the premises of successful adult learning where as pedagogy refers to a manner of learning seen in
children (Smith, 2002). Knowles believes that there are five main concepts of adult learning that need to be incorporated in adult learning programs. These include self-concept, experience, readiness to learn, orientation to learning, and being motivated to learn (Green & Ellis, 1997; Knowles, 1984; Watson & Pullian, 2000).

The Stages of Change Model developed by Prochaska and DiClemente (1983) seeks to explain changes in behaviour. As previously noted it is also referred to as the Transtheoretical Model and apply an eclectic response to other theories (Prochaska & Velicer, 1997). The model dictates that understanding of the discrete stages of change is useful in the implementation of effective health promotion strategies. The six stages of change described in the Transtheoretical Model (precomtemplation, contemplation, preparation, action, maintenance, and termination) suggest there is a temporal dimension to behaviour change that recognises change does not just happen as an event on its own and that individuals move back and forth between the stages at any given time. The Transtheoretical Model has received empirical support in behavioural domains such as exercise-related and smoking-related behaviour change models (Woodward & Berry, 2001). The clinical relevance of the Transtheoretical Model to health promotion counselling is first to determine what stage the patient is in, and then supporting them to progress along the continuum of change. The model also assists the clinician to appreciate the individual's receptiveness to change, and help determine the type and nature of the health care intervention required at that given time (Ounpuu, Woolcott & Rossi 1999; Robichaud-Ekstrand 2002; Ryan & Lauver, 2002).

The Roy Adaptation model is a nursing theory that views a person from an holistic perspective and recognises that people are "bio-psychosocial [individuals who are], capable of adapting effectively to changes in the environment ... and that coping and adapting are conscious choices" (Uding, Jackson, & Hart, 2002, p. 298). A nurse is responsible therefore for promoting positive patient outcomes. According to Roy
(1997) nurses are accountable for promoting and fostering positive patient outcomes and to do this must take ownership of their own ongoing mastery and competence. Ongoing mastery and competence then allows nurses then to promote patient autonomy to enhance patient self-management of their health and outcomes.

Finally, the concept of Health Locus of Control developed by Rotter in 1966 (Gillibrand & Flynn, 2001). As described in Chapter Two in some detail, Health Locus of Control subscribes to three elements that can account for why people behave as they do. These are internal locus of control, which refers to taking self-control so that the person will seek their own answers and decide what behaviours or action is needed; external locus of control, where the person needs help from outside to seek their answers; and the influence of powerful others, which could be an economic situation or a social situation that influences one's decisions about how to act. While some researchers have found the health locus of control is able to predict behaviour (Bergman, and Berterö, 2001), others have not found it useful (Callaghan, 1998).

Each of the theories briefly described in this chapter so far provide a valuable insight into how people can be motivated to change behaviour (Whitehead, 2001). However, none of these theories adequately provided a framework to address the study aims and decide on a study design. The Theory of Reasoned Action (Ajzen & Fishbein, 1980), a behaviour theory, specifically addresses attitudes and behaviour. Attitude was suspected by the researcher to be a major factor in nurses’ willingness to undertake health promotion and health education. In addition, the Theory of Reasoned Action also accounts for more of the variables that impact on an individual’s decision about how they will actually behave (Conn, Tripp-Reimer & Maas, 2003). These variables include anxiety, level of knowledge, demographics, and a high level of ‘internal locus of control’ (Callaghan, 1998). Thus the Theory of Reasoned Action was chosen to guide
the study. The Theory of Reasoned Action will now be described and analysed in the following section.

Theory of Reasoned Action

While the theory of reasoned action was first described in 1975, both Ajzen and Fishbein have continued to refine and validate the theory since that time (Ajzen, 1985; Ajzen & Driver, 1992; Ajzen and Fishbein, 1980; Ajzen & Madden, 1986). The theory suggests that intentions to perform an action are determined by two types of personal beliefs or attitudes. The first is the person’s belief that a positive outcome will eventuate if a particular behaviour is performed, and is referred to as the ‘attitude towards behaviour’ (Ajzen & Fishbein, 1980, p.6) and is personal in nature. Thus an attitude is developed through an individual’s life experiences. The second determinant is the person's socialisation within a group, which Ajzen and Fishbein refer to as ‘subjective norms’ because it is associated with ‘prescriptive’ perceptions (Ajzen & Fishbein, 1980, p.6). If the group believes in the value of a particular behaviour then the individual could be pressured into acting out that behaviour. Figure 3.1 demonstrates how the concepts of Fishbein and Ajzen’s Theory of Reasoned Action interrelate.
Both of these beliefs or attitudes can be held concurrently when the individual is confronted with a particular problem. The behaviour that is acted out depends on the predominance of each attitude at a given time or circumstance. The Theory of Reasoned Action reminds the researcher of when she was a novice nurse. Anecdotally, the researcher recalls the “socially acceptable” attitude towards ‘talking’ with patients when working on a ward was that it was a waste of nursing time and that if you were a ‘good’ nurse you would resist this behaviour and move onto ‘real’ nursing work. Activities such as bed sponges, giving out bedpans to patients, and bed making were considered to be ‘real’ nursing work and should be performed efficiently so that more of the same would be achieved. Concurrently, the novice nurse had a “personal attitude” that a nurse should that talking with the patients’ to provide emotional support. To discuss patients concerns with them shows empathy towards them as individuals, and other discussion of topical events or issues attempts to bring some normality to
their day. Both of these functional beliefs create confusion in a nurse’s mind. Frequently this confusion of expected attitude and subsequent behaviour of the novice nurse has resulted in the “personal attitude” being acted on when no one was looking, and the “socially acceptable” behaviour performed when the social circle were looking for speedy achievement of ‘real’ nursing work.

Presumptions of the Theory of Reasoned Action
Ajzen and Fishbein (1980) suggested that some presumptions need to be considered when applying the Theory of Reasoned Action. Presumptions are concepts that are taken for granted in a particular context and Ajzen and Fishbein purport that within the Theory of Reasoned Action there are four main presumptions. These presumptions have been developed through work in the building of the theory and are summarised in Table 3.1. Their presumptions indicate that the Theory of Reasoned Action relates to ‘reasoned’ rather than ‘automatic’ behaviour and these ‘reasoned’ actions of behaviour are a consequence of attitudes and beliefs. Consequentially, if we reason or believe a positive outcome will eventuate from a particular action, we will have a positive attitude to adopting the behaviour.

Table 3.1 Presumptions to consider when applying the Theory of Reasoned Action (Ajzen & Fishbein, 1980).

<table>
<thead>
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<th>Presumptions</th>
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<tr>
<td>Humans are rational beings and make systematic use of information that is available.</td>
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<tr>
<td>Humans are not controlled by unconscious motives or desires.</td>
</tr>
<tr>
<td>Human behaviour is not capricious or thoughtless.</td>
</tr>
<tr>
<td>Humans consider the implications of their actions before deciding to engage in a particular behaviour.</td>
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</table>
External variables will also potentially impact on our attitudes and behaviour. For example factors such as gender, age, social class, ethnicity, being an introvert or an extrovert, and having the need for achievement or advancement may impact upon our attitudes and beliefs. Figure 3.2 illustrates the relationships of these variables and how an individual decides what to act out using the Theory of Reasoned Action.

![Diagram of the Theory of Reasoned Action]

Figure 3.2 Indirect effects of external variables on behaviour (Ajzen & Fishbein, 1980, p. 84).

**Application of The Theory of Reasoned Action**

The Theory of Reasoned Action has been used as a theoretical framework in several recent research studies and also some program or service development strategies (Conn, Tripp-Reimer & Maas, 2003; Kretzer & Larson, 1998; McKinlay, Couston & Cowan, 2001; Poss, 2001; Wallace, et al. 1997; Werner & Mendelsson, 2001).
Self-care management of disease is the goal of many clinical interventions (Carter & Kulbok, 2002; Donaldson, Rutledge & Pravikoff, 2000; Gonser & McGuiness, 2001; NSW Health, 2003; Trocino, et al. 1997) and behavioural change is well placed to guide the achievement of these goals (de Weerdt, Visser and van der Visser, 1989). De Weerdt, et al. (1989) have reviewed attitude and behaviour theories in diabetes education programs. Their review identified that, while the health belief model is popular, the model developed by Fishbein and Ajzen accounts for more of the variables that impact on an individual’s decision about how they will actually behave. These variables include anxiety, level of knowledge, demographics, and a high level of ‘internal locus of control’. Given this theoretical perspective, an education program for diabetes would provide not only information relating to the disease process, but also emphasise self-management, considering the external variables as described in Figure 3.2. Incorporation of the concepts of the Theory of Reasoned Action will likely decrease anxiety, and promote an internal health locus of control (Gillibrand & Flynn, 2001). These strategies will assist participants to increase their belief in their own power to influence their health outcomes positively. In order to overcome social pressures, referred to by Ajzen and Fishbein (1980) as the social norms, a patient self-management program would include significant others in the activities of the program to optimise social pressures to enhance behaviours selected.

The Theory of Reasoned Action has also been used to guide the encouragement of modification of behaviours in several areas including: provision of oral care for people receiving chemotherapy (Wallace, et al. 1997); promotion of interventions to improve infection control practices (Kretzer & Larson, 1998); determining key factors associated with individual’s participation in a tuberculosis screening program (Poss, 2000); studies of nurses’ behaviours towards patients who deliberately poisoning themselves (McKinlay, Couston & Cowan, 2001); identification of nurses’ intentions regarding the
use of physical restraints with older people (Werner & Mendelsson; 2001); guiding the development of a research program (Poss, 2001); and to determine what influences the exercise behaviours of elderly women (Conn, Tripp-Reimer & Maas, 2003).

In the studies reviewed here, researchers have reported that the Theory of Reasoned Action was a useful framework and helped explain behaviour (Wallace, et al. 1997; Kretzer, et al.1998; McKinlay, et al. 2001; Werner, et al. 2001). Poss (2000) however found that while the theory supported her study outcomes, it did not sufficiently explain all behaviour. Personal beliefs and attitudes were not found to be predictive of behaviour in her participants, but social norms or attitudes were predictive of behaviour. Subsequently, Poss (2001) considered combining the Theory of Reasoned Action with the Health Belief Model in the belief that intention variables would be completely addressed (Poss 2001). However, Poss’ (2001) study was the only study reviewed that did not find congruence with the Theory of Reasoned Action.

**Application to this Study**

Fishbein and Ajzen’s Theory of Reasoned Action was considered to be the most appropriate theoretical framework for the proposed study for two main reasons. Firstly, it recognises the complexity and interrelationship between individual’s attitudes and beliefs, their intentions, consequential behaviours and responses. Secondly, as the practice of nursing often comprises collective, organisational behaviours, many behaviours occur because of nursing’s social values. The Theory of Reasoned Action framework considers the individual’s behavioural intention as the critical factor in determining actual behaviour. The behaviour intention is eventually determined by which influence is a higher priority at the time. Critical to the study design (described in Chapter 4) was the need to analyse nurses’ attitudes and responses to the provision of patient education to individuals with diabetes. However, there was also a need to
consider the impact of socialisation and collective values of nurses. In order to better understand behaviours of nurses it was important to analyse the determinants of individual attitudes and normative components of the environment in which those individuals work. These key components contribute to the motivation to perform a particular action. In order to use the Theory of Reasoned Action it was also necessary to determine cognitive elements (i.e. knowledge) as well as attitudinal and normative considerations. In summary, the key elements of the Theory of Reasoned Action are that "the ultimate determinants of any behaviour are the behavioural beliefs concerning its consequences and normative beliefs concerning the prescriptions of others" (Ajzen & Fishbein, 1980, p. 239).

Ajzen and Fishbein (1980) discuss the use of both qualitative and quantitative data to determine answers to research problems considering behaviour. Their description describes the use of interviews to guide questionnaire development and also observational data. Poss (2000) used both interviews and a questionnaire in her study regarding the factors that influence Mexican migrant farm workers in a health-screening program.

Conclusion
The Theory of Reasoned Action first described by Fishbein and Ajzen in 1975 was chosen to guide the current study because the theoretical framework was well placed to address the study aims and supported by the researcher’s clinical experience. While previous studies described attitudes of nurses providing this vital aspect of nursing care, these studies have not determined if in fact these attitudes are acted out in behaviours with hospitalised people who have diabetes. The methodology used in the study is described in the following chapter.
CHAPTER FOUR
Methodology and Methods

Introduction
Methodology has a variety of meanings but broadly refers to the way research is conducted (LoBiondo-Wood & Haber, 1998). It is the design of the research, which is informed by the theoretical framework as discussed in Chapter Three (Roberts & Taylor, 2002). Methods are what is actually applied or used in a research project. It is a description of what was actually done (Roberts & Taylor, 2002).

The study used a mixed methods approach, incorporating a questionnaire and individual interviews to investigate the research problem. By combining these two perspectives in a complimentary fashion a more wide-ranging research design was facilitated.

This chapter provides a description of the methodology including the perspectives of the quantitative and qualitative paradigms, triangulation in research, and then a brief overview of content analysis. Finally, a description of the methods used during the research project is provided.

Methodology
Nursing research has two main paradigms, naturalistic, which is closely associated with qualitative research, and positivistic, which is associated with quantitative research (Polit & Beck, 2004). Both paradigms have a variety of methodologies or approaches that
can be used to guide the research process (Schneider, Elliot, LoBiondo-Wood & Haber, 2003).

Qualitative research is inductive in that it seeks to understand deep humanistic issues and builds its outcomes by involving those with experience in the phenomena (Asselin, 2003; Polit & Beck, 2004). It uses reasoning that involves observation of a particular set of instances that can be identified with a larger group of people who have experienced the same set of instances (LoBiondo-Wood & Huber, 1998). The data obtained is deep and rich with description of the phenomenon. Conversely, quantitative research is vastly different in that it utilises deductive reasoning processes. It begins from a general perspective or existing theoretical position, and then deduces that the outcome can be applied to particular circumstances (Polit & Beck, 2004). In broad terms, qualitative research seeks to explore and derive deep understanding of a phenomenon (Polit & Beck, 2004). All concepts are investigated fully until a description is available. Alternatively, quantitative research uses a reductionist approach to describe phenomena or prove a theory and/or hypothesis (Kelly, & Long, 2000; Polit & Beck, 2004).

The conceptual underpinnings of the research processes are very different in each paradigm with the steps taken occurring in a different order or approach. An example is that in quantitative research the theoretical framework is selected following the literature review, whereas in qualitative research the concepts that form the theory are developed out of the interpretations of the data (LoBiondo-Woods & Haber, 1998).
The study methodology

The methodology chosen to address this research question was predominantly quantitative nature as described by LoBiondo-Woods and Haber (1998). However, a combination of both qualitative and quantitative methods were used, which is commonly referred to as triangulation or multi-method (Maggs-Rapport, 2000; Polit, & Beck, 2004; Risjord, Dunbar & Moloney, 2002; Schneider, et al. 2003; Thurmond, 2001; Wendler, 2001). Triangulation was chosen because the researcher was not convinced either a qualitative or a quantitative approach would sufficiently answer the research questions. Nursing is a humanistic phenomenon the researcher wanted to know what was happening in a broad sense when nursing people with diabetes. It was also recognised that circumstances can be different for nurses in even one setting. While a predominantly quantitative research framework was chosen for the study, the researcher also chose to include a qualitative aspect to confirm the quantitative findings and to provide deeper understanding and meaning using a triangulated approach.

Triangulation

Triangulation is the term used when elements of a project are studied from two or more angles (Thurmond, 2001). The research design or parts of the design is approached from a variety of perspectives, usually an effort to increase the power of or to validate research outcomes (Roberts & Taylor, 2002). The research design then gives a multidimensional perspective of the phenomena studied (Thurmond, 2001) and the findings should bear more confirmation and strength to the outcomes (Morse, 1994). Triangulation can be simultaneous, completed in one study, or sequential, and is accomplished over a series of studies (LoBiondo-Wood & Haber, 1998; Morse, 1994).
When considering the research question the researcher had difficulty in selecting a method that would answer the research question in a comprehensive manner. A triangulation methodological approach was chosen because the nurses’ attitudes and behaviours could be studied from a multidimensional perspective. The quantitative perspective allowed for the study to reach a large number of nurses working in Western Sydney, allowing a broad range of data to be collected, and the qualitative perspective enabled some nurses to provide richer descriptions of their attitudes and behaviours. The following section briefly describes different approaches to triangulation studies as well as the barriers to and facilitators of triangulation.

**Modes of Triangulation**

The literature describes five main ways to employ triangulation. Some studies use only one method, while others use two or more types of triangulation (Burns & Grove, 1993). The five types of triangulation are data source, investigator, methodological, theoretical, and analysis triangulation (Janesick, 1994; Thurmond, 2001).

**Methodological Triangulation**

Roberts and Taylor (1998) describe methodological triangulation as using more than one research method within one study. It may be within either the qualitative or quantitative perspective, or between methodologies, using both a qualitative and quantitative method in the one study. Terms used to describe methodological triangulation include “multi-method” (Tolson, Smith & Knight, 1999) and “mixed method” (Magges-Rapport, 2000). It is thought that methodological triangulation provides richer data by the possibility of exposing information that may have remained undiscovered if one method had been used (Polit & Hungler, 1995).
While some nurse researchers believe that either quantitative or qualitative methodological approaches are the means to understanding a phenomenon, there are others who believe that methodological triangulation can add to the understanding (Foss & Ellefsen, 2002). Advocates methodological triangulation believe that nursing, being a multifaceted and complex phenomenon, requires elements of both quantitative and qualitative research to really understand a problem within nursing (Sandelowski, 2000). For instance, Sandelowski (2000) advocates that in studying human behaviour and human understanding, a mixed methodological approach results in greater understanding of the research phenomenon.

The methods of conducting methodological triangulation are numerous, but in all instances the most challenging aspect is relating the data so that the research does not end up being two studies within one (Foss & Ellefsen, 2002). Often the researcher will have a particular stance towards one method; however this does not lend itself to methodological triangulation (Coyle, 2000). Successful triangulation requires reflexivity between the two methods, not leaning towards one or the other (Foss & Ellefsen, 2002). Then the two research paradigms can work together to add more understanding of the phenomenon under study.

**Data Source Triangulation**

Thurmond (2001) suggests that if data source is varied then weight or believability could be added to the study, as it will reveal atypical data, and likewise similar data. Thurmond (2001) describes three types of data source triangulation. These are to do with the time the data was collected, the place or the setting, and from whom the data was collected, while others discuss yet other ways of data source triangulation. This includes the study of a phenomenon from both qualitative and quantitative perspectives and also the varying data sources within the methodologies of qualitative and
quantitative perspectives (Bechtel, Davidhizar, & Bunting, 2000). An example within
the qualitative framework is the collection of data on one episode of interaction but
recording tone of voice, nonverbal gestures, as well as the content of the verbal
conversation. Begley (1996) suggests that diary notations, interviews and observation
are three ways of collecting data from one participant. She discusses how data can be
strengthened by a variety of data collection methods from the same source.

**Investigator Triangulation**

According to Roberts and Taylor (1998) investigator triangulation occurs when two or
more expert researchers with different skills work with the data. One researcher may
be skilled at interviewing, while another is expert at observational data collection, and
another may be expert at coding data. Also there may be two or more experts in one
particular methodology and, especially if there has been no prior collaboration, their
similar findings will lend confirmation and credibility to the findings (Thurmond, 2001).
Bechtel et al. (2000) also discuss how researchers from different backgrounds are
useful in analysing complex and emotionally charged concepts, citing that more
thorough understanding may be gained if different perspectives are considered.
Participants in research can also be part of this investigator triangulation and if
participants review the findings and agree that they reflect what they were saying, then
this will add validity and can help counteract assumptions and bias. (Bechtel et al.
2000).

**Theoretical Triangulation**

Theoretical triangulation refers to the use of different theories within the theoretical or
conceptual framework (Robert & Taylor, 1998), which may be used to either test a
theory or to generate a theory (Shih, 1998). Shih describes her use of theoretical
triangulation using both multiple theories to guide her study and then also to generate a
theory. Shih described how she and her colleagues used physiological, holistic and transcultural theories to design and guide the data collection and analysis, with the result being that a new theory was generated out of the study (Shih, Chu, Yu, Hu, & Huang, 1997).

**Analysis Triangulation**

Analysis triangulation refers to the analysis of a single set of data from two or more perspectives or techniques in an effort to enhance confidence in the findings (Bechtel, Davidhizar & Bunting, 2000). An example of this is if the study is designed to investigate behaviours of the participants while performing a task and also how they interact with their colleagues while working on the task (Shih, 1998).

**Advantages and Disadvantages of Triangulation**

The literature reports a variety of reasons where triangulation is of benefit to a study as well as some shortcomings to be aware of. The following two paragraphs will discuss some of the major reasons, and these were considered when deciding on the current study design.

**Advantages of Triangulation**

The use of triangulation in some studies can be beneficial where a single method would be inadequate (Burns & Grove, 1993). Triangulation can often give a more complete understanding of the phenomenon, increasing confidence in the results and overcoming investigator bias (Roberts & Taylor, 1998). Additionally, the use of investigator triangulation can allow for expert analysis of data that may not occur with one investigator, as few researchers are adept at more than one type of analysis (Thurgood, 2001). The completeness, and deeper, and more multifaceted
understanding of the phenomenon is implied with triangulation, thus it “confirms and thus strengthens the argument” according to Morse (1994, p.289).

**Disadvantages of Using Triangulation**

Triangulation can cause confusion for a researcher when used simultaneously, according to LoBiondo-Woods and Haber (1998). Some reasons for this could include the large amount of data that is generated and investigator bias towards one particular method (Thurgood, 2001). Furthermore, Morse (1994) suggests that some researchers do not integrate the two components of the study, and the intended use of the method does not eventuate. Others have a misguided notion that triangulation will further validate the findings just because similar results are found (Shih, 1998) Thurgood explains this is not always the case because an inadequacy from one approach does not always offset these failings. According to Thurgood and others (Begley, 1996; Betchel, Davidhizar & Bunting, 2000; Shih, 1998; Tolson, Smith & Knight, 1999) the primary theory or method should always be rigorous enough to sustain the study with the added method adding strength by confirmation and adding more completeness to the data.

**Triangulation in this Study**

To meet the research objectives of the current study, methodological triangulation was used, with a “mixed-method” approach. A questionnaire to survey nurses (quantitative data) and individual interviews of some of the nurses participating in the current study (qualitative data) were employed. These two methods were used in an effort to provide a complementary view of what is actually happening in the real world of nursing concerning health promotion and health education for people who have diabetes. In developing the research proposal, the researcher believed that neither a quantitative nor a qualitative method in isolation would describe what was happening.
Investigations regarding various methodologies did not give the researcher confidence that any would adequately answer the problem. The primary reason for selecting a mixed methods approach for the current study was that the researcher believed that a richer and comprehensive understanding of health education and health promotion required a multifaceted approach. A mixed methods approach would provide the opportunity to develop broad general knowledge together with deeper insight into particular nurses’ attitudes and behaviours. As content analysis was used to interpret the qualitative (i.e. interview) data, a brief discussion on content analysis will now follow.

**Content Analysis**

Polit and Beck (2004) define content analysis as “the process of organising and integrating narrative, qualitative information according to emerging themes and concepts” (p.714). Content analysis is a common method of making sense of narrative, to condense it down while still capturing the essence of protracted descriptions of a phenomenon (Granehein & Lundman, 2003). To begin this process the researcher has to consider some preliminary steps. These include how the data will be interpreted, what constitutes a unit of analysis, a meaning unit, the groupings, the labelling of units and categories, and finally placing all these in themes. Granehein and Lundman (2003) give a concise overview of these concepts. They describe this as determining if data will be interpreted according to the exact words used in the data or if the words will be placed according to their meanings within sentences or paragraphs. Subsequently they describe how the researcher then has to determine what units mean the same and group those together. Following this larger groupings need to be determined in larger categories and finally into themes.
In reality, it must be recognised that words and sets of words or sentences can have several meanings and could be placed in different codes and possibly final themes (Granehein & Lundman, 2003). Content analysis was the process used in this study to analyse the interview data using a constant comparative technique. The process used to determine the final categories and the over-arching themes of this research is described on page 70.

**Study Aim**

As described in Chapters One and Two, a key aspect of the nurses’ role is assumed to be patient education and other aspects of health promotion. The aim of this study was to explore and describe the extent to which clinical nurses, working in Western Sydney hospitals, feel able to fulfil their role in providing health promotion and health education to patients with diabetes.

Specifically the aims of the study were to:

- Determine the type and level of assessment strategies nurses use when performing patient education related to diabetes management.
- Determine the role of nurses when referring patients to specialist diabetes educators.
- Determine the extent to which these nurses feel able to fulfil the roles of patient assessment for their need of further diabetes education and their role in referral for diabetes education.

To examine these aims an understanding of nurses’ attitudes and behaviour was required. Their attitude towards diabetes in its entirety needs to be understood. That is, from a pathophysiological and management perspective as well as from the perspective of attitude regarding patient self-management and maintenance of skills.
**Study Design**

The current study used a mixed-method design that was deemed appropriate and necessary to not only describe nurse’s attitudes to diabetes, but also their perceptions of their actual engagement in health promotion and health education. Variables related to prior exposure of the individual nurses to diabetes, either professionally or privately, were identified from demographic data about each participant.

A combination of questionnaire (Appendix 3) and individual interviews were used. The process of questionnaire development is discussed in Chapter Five. The research process generated both quantitative and qualitative data that contributed to the triangulated analysis.

The debate surrounding the presuppositions of triangulation and the mixing of methods were recognised and considered (Risjord et al., 2002). However, it was considered that the complementary approach used in this study increased the deeper understanding of the responses to the study questions. In addition, it was considered that a triangulation method would allow for a larger number of nurses to be consulted as well as providing the opportunity to further explore issues in-depth through individual interviews.

**The Setting**

Seven public hospitals in Sydney were accessed to conduct this project. Wards at each site were selected after consultation with diabetes educators at each hospital. This facilitated the identification of wards, which consistently have a number of patients who have diabetes.
Research Participants

The research participants included a purposive sample of registered and enrolled nurses working in either medical or surgical wards of several hospitals in Sydney, New South Wales. All potential participants were deemed capable of interacting with English speaking patients, and therefore with the researcher. Nurses who worked in high dependency or intensive care units or who were specialist diabetes nurses were excluded from the study. Their exclusion was because the researcher believed their work entailed a deeper understanding of the concepts of diabetes. Additionally, the researcher wanted to know what was happening when the patients were more likely to be not so unwell and thus more receptive to health promotion and health education.

Purposive sampling is described by Schneider et al. (2003) as a process of selecting research participants because of their specific characteristics. Selection of participants in this way is done so that these participants have knowledge and experience of the topic to be studied.

Administration of the Questionnaire

Following approval to proceed with data collection from both the university and area health service ethics committees, the researcher sought permission from the Area Directors of Nursing to approach individual hospitals. Subsequently, letters to the individual Directors of Nursing were sent, seeking permission to contact diabetes educators and individual wards. The diabetes educators were asked to suggest wards where the data collection could possibly proceed.

Once the wards were identified the researcher made phone contact with Nursing Unit Managers (NUM) to arrange a meeting to discuss the research. Each NUM gave
verbal to collect data from the nursing staff working on that ward. An introductory
meeting was then held on two occasions to explain the purpose and procedure of the
study. The questionnaires with information sheets (Appendix 2) in envelopes
addressed to each nurse were left on the ward with each questionnaire given a
number. This was done so that participation rates could be determined on each ward
as well as overall. Names were not attached to questionnaires. Only the researcher
could link the nurses’ to their ward by the numbers on the questionnaires. In an effort to
enhance participation in completion of the questionnaire the researcher attended each
of the wards on two to four occasions to remind the nursing staff about the study. The
nurses involved in the questionnaire part of the research were then invited to
participate in the individual interview process. This will now be described.

Interview Development

In order to augment questionnaire data and to provide deeper exploration, thirteen
individual interviews of nurses were conducted. These interviews sought to elicit richer
understanding of the reasons why nurses were or were not engaging in health
promotion and health education. Nurses could indicate their willingness to be
interviewed at the end of the questionnaire.

Interview questions (Appendix 5) were developed from the literature and nursing
experience of the researcher. The goal of each interview was to allow participants to
further describe and discuss their experiences, their behaviour and attitudes when
caring for people with diabetes. The questions were used to guide each interview
rather than prescribe a set format. Additional questions were asked on the basis of
each participant’s response.
Conducting the Interviews

Nurses who completed the questionnaire were invited to participate in the interview process. This invitation and explanation was given at ward meetings in their workplace. Nurses volunteered to participate and a meeting place and time was arranged. The nurses who agreed to the interview were also given the participant information sheet and the consent to participate form at the time of scheduling the interview. This allowed them time to consider their involvement. Each gave the researcher a signed copy of the consent form at the time of the interview.

The interviews were held at a place convenient for the nurses. Eleven were held in a private room off the ward where they worked. However, one was held in an office that was frequently interrupted during the interview and another was held away from the hospital. The office interview was with a nurse who also had rostering responsibilities and was thus reluctant to make the room out of bounds, or to move elsewhere for the interview. The interview held away from the hospital was for convenience reasons of the nurse. All the interviews were conducted with only the researcher and the participant in attendance. Each nurse was interviewed once for 30 to 60 minutes. All interviews were audio-taped for later verbatim transcription.

Following each interview, field notes were written to describe non-verbal experiences. A quiet area was chosen, usually the researcher’s car, immediately after each interview to write down this information while it was fresh in the researcher’s mind. The topics recalled included the researcher’s thoughts during the interview, how the participant was reacting in stance and facial expressions, issues related to the setting, and other aspects of the interview that the researcher thought had an impact on the interview content.
Data Collection

Questionnaire and individual interview data were collected concurrently as shown in Figure 4.1.

![Data collection schemata](image)

Figure 4.1 Data collection schemata

Quantitative Analysis

Quantitative data was analysed using the Statistical Package for Social Sciences (SPSS) Version 10 (SPSS Inc.). Data quality was assured by random data checking techniques and frequency analysis. Descriptive statistics were used to analyse the data derived from the questionnaire. Inferential statistics were not incorporated due to the exploratory study design and the intention to allow the qualitative data to unravel and elucidate the associations and relationships within the study findings.

Qualitative Analysis

Qualitative analysis was managed with the assistance of NUD*IST Version 6 [N6] (QSR, 2002). Audio-tapes and field notes were transcribed verbatim into a word document and then transported to the N6 software. Content analysis techniques were used with the researcher beginning the process by reading each interview transcription numerous times in search of categories and sub-themes. Initial coding was achieved through some of the concepts found in the nursing literature regarding the research topic. These codes were ‘nurses education’, ‘workload’, ‘frustration’, ‘patient
education’, ‘patient understanding of diabetes’, ‘long-term complications’, ‘health promotion and health education’, and ‘social support’. Following this, codes were generated directly from the interview data with some related to the originals. Variations of the originals included ‘frustration – patients’ and ‘frustration – other nurses’. Other examples of codes that developed from the data were ‘nursing care’, ‘resources’, ‘responsibilities’, ‘personal experience’ and ‘professional experience’. Some of these codes could be easily categorised while other codes were initially placed in more than one category. After further inductive analysis, more categories developed and the codes were re-grouped. Finally, the categories developed into the main resultant sub-themes. Most of this theme building was facilitated with N6 and its utilities but the final grouping into the major themes was done with paper cut-outs of each code. The sub-themes were piled into themes to give the researcher a physical picture of what codes fitted into what theme. Finally, the over-arching theme became obvious. This process was lengthy and required re-reading the data until it became apparent the all codes and categories were conceptualised by the sub-themes. Throughout the analysis the coding and development of categories and sub-themes was checked by one of the research supervisors.

The Researcher

The researcher is a cardiac nurse specialising in cardiac rehabilitation. This research had a qualitative perspective therefore I need to declare my relationship to the potential participants and how my prior experience could prejudice all aspects of the research (Koch, 1994). The researcher has to accept and recognise these potential prejudices. As a registered nurse with many years experience in a variety of settings, I have considerable experience in providing nursing care for people with diabetes. My experience has influenced my beliefs and attitudes towards my colleagues in relation to patient education and health promotion. This issue was discussed at length with my
supervisor, considering how to try and not exert my own ideas when conducting the research, and how to be ‘with’ the nurse being interviewed. I had to concentrate on allowing the participant to give their point of view and description of their experiences and behaviours.

**Gaining Trust**

To offset possible reticence on the behalf of participants and to be open with descriptions, a brief discussion at the beginning of each interview was undertaken. This was done to gain an element of trust in the researcher by the participant and has been shown by other nurse researchers to be an effective strategy (Hutchinson & Wilson, 1994). In addition, Schutz (1994) discussed the benefits of the researcher becoming familiar with and sharing the research experience with the participants. She also acknowledges familiarity and sharing may compromise the trustworthiness of the research, as confirmed by Koch (1994), but feels the possibility of compromising trustworthiness is offset by the benefits gained in richness of the data collated. Once trust is gained, the researcher can step back and probe without prompting or eliciting descriptions the researcher would want or expect. The participant can then describe their own happenings.

**Ethical Considerations**

Key ethical considerations for the study were ensuring anonymity and confidentiality, obtaining informed consent, and respect for research participants. The Human Research Ethics Committees of the University and the two Area Health Services where the research was conducted approved the study. Please see appendices 7, 8 and 9.
Procedures to Ensure the Ethical Considerations

Study participants were provided with verbal and written information by the researcher about the study and invited to volunteer to participate. Participants were informed that they were under no obligation to participate in the study. Information sheets describing the purpose of the study, ethical and confidentiality issues and included the names and contact details of the researcher and ethics committee were given to participants at the time of the questionnaire distribution and individual interviews.

Participants were also assured by both written and verbal information that all questionnaires were anonymous and confidential information could not be identified. With participants’ consent, interviews were audio-taped and transcribed verbatim for qualitative analysis. Participants were not identifiable on any transcripts, reports or publications generated by this project, allowing for complete anonymity. Appropriate data storage and retention was implemented with reference to the Joint National Health and Medical Research Council (NHMRC) / Australian Vice Chancellor’s Committee (AVCC) statement and guidelines on research practice. All transcripts and materials related to the study are stored securely, in a locked filing cabinet, in the office of the Cardiac Rehabilitation Nurse Practitioner at Fairfield Hospital. All study materials will be stored for a period of five years and destroyed by means of shredding in 2005.

Rigour and Validity of the Study

As discussed earlier in this chapter, in order to enhance the rigour and validity of the study, methodological triangulation was used to explore nurses’ attitudes and behaviours. The method of complimentary analysis was used because it enhances and augments both quantitative and qualitative findings, with each method being considered equal in the analysis. (Duffy, 1987; Risjord et al. 2002). Specific issues associated with validity and reliability of the quantitative data is discussed in chapter 5.
because they are inherent within questionnaire design. Issues of rigour related to qualitative data are discussed below.

‘Trustworthiness’ is a likened to reliability and validity in quantitative research (Morse, Barrett, Mayan, Olson & Speirs, 2002). Trustworthiness is specifically broken onto four main categories, namely credibility; transferability, also known as fittingness of applicability; dependability, also known as auditability; and confirmability (Mill & Ogilvie, 2002). This means overall that the research procedures were carried out in a fair and open manner (Clayton & Thorne, 2000).

Credibility is established when the participants’ story has been told accurately and clearly (Clayton & Thorne, 2000), so that those who have experienced the phenomenon can recognise it in the reports (Roberts & Taylor, 2002). To do this the researcher needs to reflect on self-awareness of her role in the research so that efforts are made to not influence or loose the participants’ story (Mill & Ogilvie, 2002). While the researcher is seeking the stories of the participants, the researchers own beliefs could affect the meanings derived from the stories. Additionally, the analysis procedures must be done so that the real meanings are not lost (Clayton & Thorne, 2000). Credibility in the current study was achieved through discussions with one of the supervisors regarding how to put aside the researcher’s beliefs, and also through checking of the data and analysis procedures by one of the research supervisors.

Transferability or fittingness refers to the study’s applicability to other contexts that are close in nature (Roberts & Taylor, 2002). In the current study, nurses from other settings other than the research site read some of the early drafts of the qualitative chapter and could readily see there own nursing setting within the results.
Dependability refers to the consistency of the data collection (Robert & Taylor, 2002). Thus an audit or decision trail can be seen by other researchers and be able to determine the consistency of the methods. This was established in the current study through discussions with the research supervisor and through the descriptions within Chapter Four.

Finally, confirmability refers to being able to achieve credibility, transferability and dependability (Roberts & Taylor, 2002). This was achieved in the current study by all the procedures described above.

**Conclusion**

This chapter has explained the aims, study design, methods and data analyses used in the study. A triangulated study design, comprising both quantitative and qualitative dimensions was used because it was considered this would generate a rich and diverse data set. An appraisal of triangulation in its many forms was discussed including that used in this study, methodological triangulation, and why this approach was taken. A description of the steps taken to collect the data for the study was provided. Issues relating to ensuring the participants were not compromised were outlined, and then how the data was managed from collection through to presentation in this thesis. In the following three chapters the study results will be presented. Chapter Five presents the quantitative results, Chapter Six the qualitative results and Chapter Seven presents the mixed methods results.
CHAPTER FIVE

Questionnaire

Introduction

This chapter presents the development and findings of the questionnaire distributed to 328 nurses across Western Sydney in 1998. The questionnaire was designed to enhance the findings of the individual interviews, with data collected parallel to each other. Chapter Six will present the thematic analysis from data derived from individual interviews and then Chapter Seven will present the findings of the triangulated data analysis.

As well as outlining the process of questionnaire development, this chapter presents the response rate to the questionnaire and descriptions of the nurses who completed the questionnaire. Following this will be an appraisal of their answers to questions related to their understanding of diabetes, their beliefs about people with diabetes and how it is caring for them. Description will then cover their reported behaviours when caring for people with diabetes in relation to health promotion through their own patient education and subsequent referral patterns.

Questionnaire Development

The items for the questionnaire were generated from the literature review described in Chapters One and Two because it was considered these would reflect reasons why health professionals do not promote recommended self-care management of diabetes. Open-ended questions were also included in the questionnaire to give participants the opportunity to add their own reasons.
The questionnaire was developed specifically for the study because no suitable existing tool was identified. The Diabetes Attitude Scale (Anderson, 1989) was the only tool that could have been used but was rejected due to its' inability to demonstrate actual behaviour, and because King, Shute and Lehmann's (1996) participants found it too lengthy, wordy and repetitive.

The questionnaire was developed using a systematic process involving an extensive literature review and expert opinion. Each stage of the process will be described below.

1. Literature Review

Initially, a literature review was conducted using both CINAHL and MEDLINE electronic databases. Keywords included ‘bedside nurse’, ‘clinical nurse’, ‘diabetes’, ‘patient education’, ‘health education’, ‘health promotion’, ‘nurses role’, and ‘health workers’ role. Items for the questionnaire were generated from previous literature that identified the attitudes of nurses. Behavioural items were developed from the researchers’ critique of these papers. The literature review was discussed in greater depth in Chapters One and Two.

The literature was also consulted to determine how to construct a questionnaire and in seeking examples of those who described their journey in this role. Dunning and Martin (1996) give a concise and clear description of how to develop a questionnaire. Therefore their process was consulted throughout the current research journey. Their article described the steps involved in developing a questionnaire including determining the issues through the experience of those who know the problem well e.g. peers, other clinical experts, and patients, and through consulting the published literature on the issue. Dunning and Martin (1996) then discuss the draft of the questions giving
consideration that each question will provide answers to the research question or problem, and trying to avoid seeking irrelevant data. After formulating the first draft, seek opinions again from experts to determine face and content validity, and then conduct a pilot study of the questionnaire using test-retest procedures. Finally, re-examine and revise the questionnaire depending on the outcomes of the pilot study. Dunning and Martin also give a clear description of statistics that could be used in the test-retest procedures.

2. Consultation with Expert Opinion

Diabetes Educators from a variety of hospitals in Sydney were consulted for their expert opinion on wording and content. They were asked to critique the content from the perspective of both that already included and for recommendations about additional content. The diabetes educators were consulted in an effort to achieve content and face validity. Feedback from these experts was positive and provided information about political correctness and suggestions about possible answers to be offered on individual items.

The researcher consulted an academic who is considered an expert in questionnaire development at all phases of the development of this research tool. His advice included wording to use, options for answers, format, and consideration on how items would be analysed.

3. Results of Item Generation Process

Following the steps described in part 1 and 2 of this section, the following factors were considered important in item generation:

- Factors discussed in the literature as being reasons how and why nurses do or do not discuss home management of diabetes with their patients.
• Attitudes and beliefs about health promotion and health education.
• Attitudes to compliance and adherence with recommended diabetes care.
• Knowledge of pathophysiology, treatment and risk of diabetes.

Additional Factors Included In Questionnaire Design Included:
• The researcher’s own experiences as a clinical nurse working in a ward environment and as a cardiac rehabilitation practitioner across the continuum of care (from the acute in-patient phase to the community).
• Provision of space for the participants to add their own comments.
• Use of appropriate, comprehensible and unambiguous wording.
• Placement of personal details at the end of the questionnaire because this section had the potential to discourage further completion of the document if placed at the beginning.
• Assurance of anonymity.

The Final Questionnaire
The final questionnaire consisted of 28 items (see Appendix 4). Two items concerned knowledge of diabetes, two items related to attitudes regarding patients' behaviours and rights, three concerned how the nurses participating in the study were able to engage in health promotion and health education and the difficulties that inhibit this engagement, seven that address the nurses' beliefs and behaviours towards health promotion and health education, and two that concern behaviours about patient referrals to specialist diabetes educators. The remaining twelve questions sought demographic data that included previous education and experience, both personal and professional, regarding diabetes. The demographic data could not identify the participants, and pseudonyms were used throughout in transcripts, reports and publications related to the study.
Content Validity

Content validity refers to whether the items on a tool actually measure a phenomenon, which it intended to measure (Schneider et al., 2003). Content validity was achieved in development of the study questionnaire through consulting expert opinion and revising of the questionnaire based on their feedback. Experts were asked to discuss whether the content of the questionnaire was likely to derive the desired information. There was consensus among the expert review panel. Following these procedures the questionnaire was pilot tested.

Piloting the Questionnaire

The pilot test of the questionnaire took place after ethics approval was granted from both the university and area health service. The pilot site, a cardiology unit, was excluded in the main study. The nurses who participated received an individual explanation of the process and goals of the pilot study. In particular, they were asked not to consult textbooks or colleagues to find answers to questions until they had completed their involvement in the pilot study. They were also asked to provide the researcher with comments on face validity. Their willingness to complete and return the questionnaire was taken as consent to be involved in this part of the research. Thirty nurses agreed to participate and completed the procedures of the pilot study.

Test-retest procedures were followed in the pilot process (Dunning & Martin, 1996). The questionnaire was give to the thirty nurses who were asked to return the completed questionnaire to the researcher within seven days. Two weeks after this return date the questionnaire was given to the nurses again to complete. The time-frame between two administrations of the questionnaire was determined through procedures described by Burns and Grove (1993) and LoBiondo-Wood and Haber
Burns and Grove suggested a two week interval with ‘paper and pencil’ (p. 339) tools, where as LoBiondo-Wood and Haber report the time-frame is determined by the phenomenon to be studied. LoBiondo –Wood and Haber cited a study preformed by Ward and Gatwood (1994) who used a one week interval when testing the stability of a questionnaire that was designed to measure the reporting of pain and use of analgesia by people with cancer. More recent studies that have used short time-frames to test the stability of questionnaires include those published by Needham, Abderhalden, Dassen, Haug, and Fischer (2004), Pinar (2004) and Yen and Lo (2002). 

A two week interval was chosen for the current study for the following reasons:

- It was suspected that the nurses would seek information about the topic that could alter their responses.
- A greater length of time could also have impact through further experience utilising the concepts highlighted in the questionnaire.

Following consultation with the study supervisors, the two week interval was decided as appropriate.

All 30 nurses returned the questionnaire within seven days. Test–retest analysis data was performed on items relating to knowledge of diabetes resulting in a Chronbach alpha of 0.78.

At the completion of these procedures minor changes were made to the wording of the questionnaire to reduce ambiguities and redundancies and steps were then taken to proceed into the main phase of data collection. This process will now be described.
Questionnaire Aim

The aim of the questionnaire was to document demographic and educational characteristics together with attitudes and beliefs of a convenience sample of nurses working in acute care.

Study Setting

The hospitals and the wards accessed were:

a. A metropolitan district hospital catering for a diverse ethnic population. Nurses from the general medical and general surgical wards participated in the study.

b. Another district hospital in a metropolitan setting, which serves a largely low socio-economic population. The nurses from the general medical and general surgical wards were the participants at this hospital.

c. Another hospital with the same characteristics as number two. Once again the nurses from the general medical and surgical wards participated.

d. Four units at a tertiary referral centre were accessed. The wards were the cardiothoracic step-down ward, the medical respiratory ward, the gastrointestinal medical ward and the ophthalmology/vascular ward.

e. Another tertiary referral centre, which is situated on the outer fringes of Sydney and serves a population of high, middle, and low socio-economic statuses. The wards accessed were the respiratory medical ward and the orthopaedic ward.

f. A small rural health facility, which has one ward, that serves a mixture of medical and surgical patients.

g. Another rural hospital with the nurses working in the medical/surgical ward participating in the study.
Response Rate

Surveys were distributed directly to nurses in the medical and surgical wards in tertiary, metropolitan and rural hospitals and nurses were asked to complete the questionnaire. In order to optimise the response rate the researcher provided encouragement through repeated visits to the wards involved. Respondents were asked to deposit their completed questionnaire in a return box in their clinical area. This process was undertaken over a six week period.

Data Analysis

Quantitative data was analysed using the Statistical Package for Social Sciences (SPSS) Version 10 (SPSS Inc.). Data accuracy was assured by random data checking techniques and frequency analysis. Data items with missing data were excluded from the analysis. Descriptive statistics were used to analyse the data derived from the questionnaire. Inferential statistics were not used due to the exploratory study design in this phase of the study. Cross tabulations were used to explore relationships within the data.

Questionnaire Results

Baseline Sample Characteristics

A response rate of 42% (n=138) was achieved for the questionnaire. The age range of participants who completed the questionnaire was from 19 years to 60 years, with a mean age of 34 years (SD12). The majority of nurses were female (n=125, 91%) and they were either enrolled (n=32, 23%) or registered (n=100, 75%) to work as a nurse in New South Wales. They reported having nursing experience for a mean time of 11 years with a range of 1 to 40 years. Most of the nurses worked rotating rosters (69%). Table 5.1 demonstrates the age, gender and experience of the nurses.
Table 5.1: Shows the data related to age, gender, and work experience of the nurses.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (yrs)</td>
<td>19</td>
<td>60</td>
<td>34</td>
<td>12.02</td>
</tr>
<tr>
<td>Gender</td>
<td>125 F (91%)</td>
<td>10 M (7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing Experience (yrs)</td>
<td>1</td>
<td>40</td>
<td>11</td>
<td>8.93</td>
</tr>
</tbody>
</table>

The highest nursing qualification that most of this group had at the time of data collection was either a certificate or bachelors degree. While some of the bachelor degrees reported could have been post-graduate for nurses who had hospital-based training, the numbers who had sought formal post-graduate education are few. Only 10 nurses in this cohort had educational qualifications higher than a bachelor degree. Table 5.2 demonstrates the nurses reported highest qualifications.

Table 5.2: Demonstrates the nurses’ reported highest qualifications.

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Number</th>
<th>Percentage of Total Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate</td>
<td>59</td>
<td>43</td>
</tr>
<tr>
<td>Diploma</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>54</td>
<td>39</td>
</tr>
<tr>
<td>Bachelor Hons</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>Graduate Certificate</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Graduate Diploma</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Masters Degree – coursework</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Masters Degree – Research</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Doctorate</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Eighteen percent of the nurses were undertaking further education at the time of the questionnaire, and 20 of the 25 were enrolled in courses pertaining to clinical nursing. Twenty-one nurses reported having undertaken a course related to diabetes but these were mostly of short duration with only seven nurses had completed a course greater than four days duration and one had done a yearlong course.

Five nurses involved in the study reported having diabetes themselves and a further 75 had a friend or relative with diabetes. Fifty-four said they took a special interest in their loved-one’s diabetes. Thus nurses with a personal interest in diabetes represented 43% of the study sample.

The Findings
The questionnaire is presented in full in Appendix 5. The key findings of the questionnaire are presented in the following sections.

In order to set the scene for the questionnaire the nurses were asked about their frequencies of nursing people with diabetes in an 'average week'. Ninety one percent (n=124) said they cared for a person with diabetes at least two to five times in an average week while 33% (n=43) said they had an opportunity to discuss diabetes self-care management with a patient only up to once in their ‘average week’. This finding demonstrates that there is a mismatch between access to patients with diabetes and provision of information.

Nurses’ Understanding of Diabetes
Question 1 sought to ascertain nurses understanding of fundamental principles of diabetes. Please note that each statement was deliberately not worded to be correct.
An example is in relation to Type 1 diabetes being more serious than Type 2 diabetes.

Responses are given in Table 5.3.

**Table 5.3:** Responses regarding diabetes etiology and management.

<table>
<thead>
<tr>
<th>Item</th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endocrine disorder</td>
<td>125 (91%)</td>
<td>7 (5%)</td>
</tr>
<tr>
<td>All types should be treated seriously</td>
<td>135 (99%)</td>
<td>2 (1.5%)</td>
</tr>
<tr>
<td>Type 1 is more serious than Type 2</td>
<td>52 (38%)</td>
<td>83 (60.6%)</td>
</tr>
<tr>
<td>Exercise is not needed for maintenance of optimal control</td>
<td>128 (93%)</td>
<td>9 (7%)</td>
</tr>
<tr>
<td>Blood glucose monitoring is not needed in diet control only of diabetes</td>
<td>131 (96%)</td>
<td>6 (4%)</td>
</tr>
<tr>
<td>Lifestyle plays a part in onset of diabetes</td>
<td>124 (91%)</td>
<td>11 (8%)</td>
</tr>
</tbody>
</table>

Question 2 then sought the nurses understanding of the long-term complications of diabetes. This question was used to see if the nurses had an understanding of the seriousness of uncontrolled diabetes. Autonomic Neuropathy was referred to as ‘*Auto Neuropathy*’, a term commonly used in the literature when referring to this condition. However, it is accepted that this may have confused the nurses. Table 5.4 depicts the nurses’ responses.
Table 5.4: Nurses’ responses to their knowledge of the long-term complications of diabetes.

<table>
<thead>
<tr>
<th>Item</th>
<th>Correct</th>
<th>Incorrect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronary artery disease</td>
<td>97 (71%)</td>
<td>36 (26%)</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>118 (86%)</td>
<td>16 (12%)</td>
</tr>
<tr>
<td>Retinitis</td>
<td>34 (25%)</td>
<td>98 (72%)</td>
</tr>
<tr>
<td>Autonomic neuropathy</td>
<td>62 (45%)</td>
<td>72 (53%)</td>
</tr>
<tr>
<td>Nephropathy</td>
<td>89 (65%)</td>
<td>45 (33%)</td>
</tr>
<tr>
<td>Peripheral vascular disease</td>
<td>121 (88%)</td>
<td>13 (10%)</td>
</tr>
<tr>
<td>Chronic bowel syndrome</td>
<td>130 (95%)</td>
<td>4 (3%)</td>
</tr>
<tr>
<td>Peripheral neuropathy</td>
<td>101 (74%)</td>
<td>33 (24%)</td>
</tr>
</tbody>
</table>

It is evident that three of the most prevalent complications of diabetes, coronary artery disease, nephropathy and peripheral vascular disease were not recognised by some nurses to be long-term complications of diabetes. One nurse alone identified one item as being a ‘trick’ item, with the term ‘retinitis’ was used instead of ‘retinopathy’. While 25 nurses answered the question correctly, it is assumed that they either picked up on the trick or they do not know about retinopathy being a long-term complication.

Both questions 1 and 2 have shown these nurses a less than desirable understanding concerning basic principles of diabetes disease process. Their unfavourable response to the seriousness of Type 2 diabetes, as being equally as serious as Type 1, is of special concern. This has serious implications considering the data on incidence, morbidity and mortality of this disease. It indicates a need for nurse education to include a higher profile of diabetes in all aspects of their curricula.
Perceptions of Patient Non-Compliance

Questions 3 and 4 are concerned with why the nurses believe people with diabetes may not comply with recommended therapies. The literature reviewed suggested people with diabetes need encouragement to adhere to recommended therapies, so it was important to establish what the nurses involved in the study believed and witnessed. The majority of nurses agreed that the reasons for patient’s non-compliance with diabetes recommended therapies are multi-factorial and includes all those suggested on the questionnaire. Interestingly, the majority (n=132, 96%) believed a reason was that people with diabetes lack diabetes education. This acknowledgement was not reflected in their description of nursing behaviours.

Understanding of Referral Processes

Questions 12, 13 and 14, sought to understand the nurses’ familiarity with referral processes to diabetes education services, their practice in suggesting diabetes education to a patient, and how many times in the past three months that they had actually referred a patient for diabetes education. Data analysis revealed that the nurses in the study were not acting on this belief. While most nurses feel familiar with the process of referral and 70% say it is moderately to very common practice to refer, only 26 (19%) reported having actually referred in the past three months. Figure 5.1 depicts this data.
Figure 5.1: The nurses reported referral rates to diabetes educators over the past 3 months.

Beliefs and Behaviours regarding Health Promotion Activities

Questions 5 to 11 related to the nurses’ beliefs and behaviours relating to how they perceive they are able to provide health promotion activities for people with diabetes and also the possible barriers to performing this role. While over half the nurses said they considered themselves moderately able to assess a patient’s current diabetes self-care (n=89, 65%), only 32 (23%) said they engaged in health promotion and health education every day. The difficulties cited for not being able to engage in health promotion and health education included:

1. Lack of time and excessive workload.
2. Language barriers.
3. Uncertainty about current diabetes care (n=51, 37%).
Figures 5.3 and 5.4 show the nurses’ difficulties and influences that inhibit engagement in diabetes-related health promotion and education.

![The difficulties in engaging patients in health promotion and health education about diabetes](image)

**Figure 5.3:** Nurses’ difficulties in engaging patients in health promotion activities about diabetes.

Some of the reasons aggregated into the ‘other’ category in Table 5.3 included patients being in denial about their disease, poor attitudes to their condition and issues related to concordance. These were expressed in response to open-ended questions such as
‘non-compliant’, ‘not wanting to take responsibility’, and ‘patient doesn’t want to know’. Other reasons included their perception of other health professionals not promoting health education and health promotion. Examples included ‘general practitioner contradicting information’, ‘general practitioner not explaining need for further education’, and ‘doctor not wanting patient discussions on diabetes’. Other reasons are depicted in Figure 5.4.

![Figure 5.4: Factors that influence the nurses to not discuss diabetes management with some patients.](image-url)
When asked about the ways nurses should stress the importance of diabetes, the majority agreed that for both Type 1 and Type 2 diabetes they should use a mixture of gentle reminders, sometimes in answers to patients’ questions, and at other times to emphasise the issues at every opportunity.

Question 10 asked the nurses what topics they thought should be mentioned in discussions with patients. They believed it appropriate to discuss a range of topics, but it was interesting to note that the discussion of physiology of the disease was not considered appropriate by 23% of the cohort. Their responses are shown on Figure 5.5.

![Figure 5.5: Nurses’ responses to topics they thought appropriate to discuss with patients who have diabetes.](image-url)
Question 10 also allowed space for other suggestions with prose answers. These are shown on Figure 5.5 as ‘other’. While not many of the nurses utilised this opportunity, the few who did suggested topics such as foot care, what to do on ‘sick days’, avoiding infections, support groups, specialist doctors, and how to use and pay for blood glucose meters and equipment. Interestingly, one nurse said the doctor should take the responsibility of discussing the patients’ medications.

The questionnaire also gave the nurses the opportunity to make further comment on any issues concerning health promotion and health education that they considered important in a free text section. Half of the respondents took this opportunity and the following themes were derived by content analysis techniques.

This free text section showed that the nurses’ beliefs regarding health promotion and health education when nursing people with diabetes related to three main themes. These included:

1. A need for nurses to have a further understanding of diabetes and its management.
2. The patients and carers need more education to inform self-management of diabetes.
3. A need for a greater focus in society on prevention strategies for diabetes.

Further, nurses suggested that their education requirements need to be addressed through ward-based updates as a well as information on where they can seek educational opportunities that formally address diabetes. One nurse mentioned the role of theories in her nursing practice. She said they are just theories and that she does not have time to implement them into her everyday nursing practice. Some of the nurses showed that they need education about how to incorporate health promotion
strategies into their everyday activities because they complained of not having time to sit with patients to deliver the messages. Some of the nurses did mention ‘opportunistic’ episodes of health promotion, so perhaps these nurses are a source of ward-based education.

The nurses’ comments in the free text section also indicated that more patient education is needed. The nurses indicated that not only is specialist diabetes education required but also other modes of adult education delivery like written material, and support from community healthcare providers such as general practitioners. They suggested that the scope of education also needed to include preventive health strategies like podiatry, optometry, and wound care.

Primary prevention strategies was another topic that the nurses who made further comment spoke about. Some suggested that a focus should be on educating the population in settings such as schools and the media. The nurses who wrote about these strategies believed that we in health often focus on treating disease rather than putting energies into supporting people to prevent disease.

Other comments related to issues already accounted for in the questionnaire. However, the desire of respondents to reiterate these factors reflected the need of respondents to emphasise these factors. The factors underscored by respondents were:

1. The burden of their workload.
2. Their inexperience in patient education, which reduces their confidence to provide health promotion and health education.
3. The challenge represented by patients who were unwilling to listen and act on advice.
4. A need to give patients information about what they want to know rather than what we think they need to know.

It was evident in the free text section that some respondents relied on other health professionals (e.g. medical professionals and dietitians) to provide patient education and to refer to specialist educators. As was found in the qualitative data, there are some nurses who rely on dietitians to provide patient education, and there are some who believe it is the role of medical officers to refer patients to other services such as diabetes educators.

Conclusion

This chapter has reported the results of the questionnaire measuring nurses’ beliefs, attitudes and behaviours towards providing health promotion and health education to people with diabetes who are hospitalised. In summary, the key findings from the questionnaire were:

1. Nurses’ understanding of basic concepts of diabetes is not at a desirable level for a prevalent and chronically disabling disease.

2. Nurses have numerous reasons for not providing health promotion and health education to people with diabetes. These include language barriers, workload, patient acuity, and patients are not appearing receptive.

3. Nurses believed patients should be involved in all aspects of the decision-making processes regarding their disease.

4. Nurses believed that patients need to know about many topics relating to diabetes. Unfortunately they rate disease physiology being as of low priority.

5. While nurses believe that people with diabetes have a lack of understanding of their disease, and are mostly familiar with the process of referring patients for
diabetes education, nurses do not refer patients very often, despite nursing people with diabetes regularly each week.

The data analysis of the individual interviews conducted with some of the nurses is presented in the following chapter. These interviews were designed to further probe and explain the attitudes and beliefs of nurses in relation to health education and health promotion strategies in diabetes.
CHAPTER SIX

Results – Participant Interviews

Introduction

This chapter reports the findings of the content analysis of the individual interviews. The interviews were conducted with nurses who volunteered to discuss their experiences when nursing people who have diabetes. The demographic data pertaining to these nurses is reported in Table 6.1. The purpose of the interviews was to explore in more depth the strategies nurses used to deliver health promotion and health education when caring for people who have diabetes and are hospitalised.

The data revealed an overall theme of THE CHALLENGES OF PROVIDING HEALTH PROMOTION AND HEALTH EDUCATION TO PEOPLE WITH DIABETES. This was derived from three sub-themes, MISSING THE BIG PICTURE, STRUGGLING TO COPE, and SUCCEEDING DESPITE THE BARRIERS. Ten categories emerged from the data. While these categories were often apparent in more than one theme, each has been described with the sub-theme they had major influence in conceptualising the data for that sub-theme. This chapter describes the qualitative findings in detail and excerpts from the data will illustrate these sub-themes.

Twelve nurses volunteered after the ward-based introductory sessions. An exception was one nurse who the researcher approached after an interview with an experienced colleague of the nurse. This nurse was in her first year following graduation from her bachelor degree and was working in a ward where the research was conducted. Her experienced colleague had described how she passed on her experiences regarding health promotion and health education to new graduate nurses. Consequently, the
newly graduated nurse was invited to participate and given a few days to consider her
decision to be involved. She was keen to be involved because she felt she had a
valuable aspect to contribute to the study. The number of nurses interviewed was
determined by apparent data saturation. When the researcher was unable to elucidate
any further new information during the final few interviews, the decision was taken to
cease data collection.

All but one interview proceeded as described in Chapter 4. The researcher terminated
one interview early, as it became apparent that the nurse was distressed by the
discussion. Despite attempts to allay her fears, that her anonymity would be
preserved, her distress remained evident. The nurse wanted to proceed but the
researcher decided to terminate the interview. The nurse’s comfort was the priority and
this was obviously compromised. The data from the interview was not analysed and
the audiotape was destroyed.
Table 6.1  Demographics of the nurses interviewed

<table>
<thead>
<tr>
<th>Nurse*</th>
<th>Experience</th>
<th>Category</th>
<th>Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allison</td>
<td>2 years</td>
<td>RN</td>
<td>Tertiary</td>
</tr>
<tr>
<td>Allanah</td>
<td>5 years</td>
<td>CNS</td>
<td>Rural</td>
</tr>
<tr>
<td>Mary</td>
<td>&gt; 10 years</td>
<td>RN</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>Edith</td>
<td>&gt; 10 years</td>
<td>CNS</td>
<td>Rural</td>
</tr>
<tr>
<td>Natalie</td>
<td>3 years</td>
<td>RN</td>
<td>Tertiary</td>
</tr>
<tr>
<td>Ann</td>
<td>2 years</td>
<td>RN</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>Peta</td>
<td>30 years</td>
<td>CNS</td>
<td>Tertiary</td>
</tr>
<tr>
<td>Monica</td>
<td>&lt; 1 year</td>
<td>RN</td>
<td>Rural</td>
</tr>
<tr>
<td>Joanne</td>
<td>2 years</td>
<td>EN</td>
<td>Tertiary</td>
</tr>
<tr>
<td>Didi</td>
<td>&gt; 10 years</td>
<td>CNS</td>
<td>Tertiary</td>
</tr>
<tr>
<td>Annette</td>
<td>&gt; 10 years</td>
<td>RN</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>Cheryl</td>
<td>&gt; 10 years</td>
<td>RN</td>
<td>Tertiary</td>
</tr>
<tr>
<td>Kate</td>
<td>&gt; 10 years</td>
<td>RN</td>
<td>Metropolitan</td>
</tr>
</tbody>
</table>

* Names are all female and are synonyms to protect anonymity

The Challenges of Providing Health Promotion and Health Education to Hospitalised People who have Diabetes

The overarching theme that emerged from the data was that there were significant challenges to providing health promotion and health education to hospitalised people who have diabetes. The nurses interviewed revealed a broad understanding of trying to provide aspects of health promotion and health education for people with diabetes. Their perspective re-enforced the existing knowledge that it was a challenge to do so, due to the multiple factors impacting on their nursing practice.
MISSING THE BIG PICTURE, the first sub-theme, was derived from the nurses’ reports that they were trying to cope with their daily workload, and were not then able to think about how patients will live with their disease once they return to their home. STRUGGLING TO COPE, the second sub-theme, described the nurses trying to deal with their workload and the apparent lack of resources in the healthcare system, their understanding of diabetes and its management, and the perceived lack of respect for the seriousness of diabetes by health professionals and patients alike. SUCCESS DESPITE THE BARRIERS, the final sub-theme, was derived from a small group of nurses who were successfully engaging in health promotion and health education, and were trying to help the nurses who were missing the big picture and struggling to cope. The final sub-theme identified was considerably different from the first two which had a negative outlook whereas the final sub-theme revealed that some nurses had a positive view about providing health promotion and health education.

For instance, Peta, a nurse of many years experience and who was passionate about her nursing, made a profound statement that illustrated the challenges that nurses deal with in their role. She said:

“...diabetes is a very complex issue for a lot of people, and they have a certain element of denial, and when they have a denial about their condition, they stay within their comfort zone. So we try and get them out of that comfort zone to look at it from a bigger perspective, they don't want to go there.” (Peta)

While Peta described her successes as being positive in the nursing setting, Didi described the frustrations some nurses feel with their colleague’s lack of thinking about their nursing care and also their understanding of diabetes. Didi’s interview revealed
that she was passionate about her nursing role and that she was comfortable with providing health promotion and health education. She, nevertheless was challenged by other nurses’ behaviours when she said:

“... because I find that lots of nurses just continue doing blood sugars, on patients for days on end, when they are basically just staying the same...” (Didi)

The three sub-themes will now be explained in detail, and more evidence to support the themes will be revealed.

**Missing the Big Picture**

*Missing the big picture* was a challenge for the nurses as they tried to meet the demands of everyday work in the medical and surgical wards. Frequently, nurses described their workload as being focused on the here and now. It was also evident that they did not have insight into living with a chronic illness. Many of the participants could not provide evidence that showed they understood what it was like to live with chronic illness. When patients were not following recommended behaviours to manage their disease, the nurses spoke of being frustrated by these patients, rather than employing strategies that may encourage the patient to comply. *Missing the big picture* described how the nurses in the study did not consider healthcare across the continuum of care, from the acute setting to living with chronic disease in the community.
The categories that described *missing the big picture* were:

- Focusing on everyday nursing tasks.
- Failing to perceive the importance of promotion of self-management.
- Reticence in referring to diabetes education.
- Paucity of contemporary knowledge, skill and resources to care for patients with diabetes.

Each of these categories will now be discussed.

**Focusing on Everyday Nursing Tasks**

Data revealed that the majority of the nurses interviewed were focused on everyday nursing tasks as a coping mechanism due to the heavy workloads on the wards. Everyday nursing tasks were also used as a rationale or excuse for not fully appreciating the importance of supporting people to self-manage their disease. There did not seem to be any insight into the value of people managing their disease which would improve their quality of life, nor the burden on the healthcare system if the disease was not managed appropriately. For instance, Natalie described an incident with a patient who was admitted for a surgical procedure. She met him on the day of his planned discharge and discovered that while he had recovered from the surgery, he did not understand his diabetes management. She then sought to delay his discharge. Her concern was that her colleagues had focused on the surgical procedure and had not considered his self-management of his diabetes. Other healthcare colleagues had not discovered his recent diagnosis of diabetes and subsequent need for further information and support. She stated:
“... but then I thought hang on a moment he's a diabetic so I [had] better just make sure that all is well ... then I read through the notes and find that he was just recently diagnosed in another hospital only a few weeks ago before being transferred to us. ... they're [patient and family] still learning how to measure his blood sugar, he didn't know what insulin to take ...” (Natalie)

The focus on everyday nursing tasks was evidenced on numerous occasions. Nurses described how their workload dictated that they could not provide health promotion and health education due to lack of time. The tasks that could be called *general nursing tasks* were foremost in the nurse's minds. Data suggested that achieving these tasks on their shift was of major importance, and despite the researcher trying to prompt the nurses to recall how they might incorporate health promotion and health education while they were performing these tasks, very few could tell me that they did incorporate health promotion and health education into the achievement of these tasks, or indeed even thought about doing it. This observation highlighted that health promotion and health education were not considered as integral components of nursing care. Sheryl, a RN of many years experience, made a statement that was common throughout these interviews.

“... and you walk them and it takes so long to get them in the shower. By the time you get back you won't have time, it's lunchtime, it's this and that, the physio comes down and then it's time for them for resting, and then obs, the family comes. We don't have time ...” (Sheryl)
Thus the theme of *failing to perceive the importance of promotion of self-management* began to develop.

**Failing to Perceive the Importance of Promoting Self-Management**

The second category of *missing the big picture* was *failing to perceive the importance of promotion of self-management*. The data revealed that the participants have preconceived notions concerning what information was required for patients to self-manage their diabetes. In order to work towards a successful outcome adults need a description of their disease, how and why it is managed in a certain way, and support to carry out the management, considering their own particular lifestyle (Knowles, 1990). One of the participants stated that she had not thought about referring a patient to the diabetes educators just because the patient was not managing in an appropriate manner. It was evident that some nurses thought referrals were mostly made when a patient was newly diagnosed or when insulin therapy was instigated.

“*... the few times that I've called [the diabetes educators], I can honestly say that it was because they were, either newly diagnosed, or they'd changed from oral to insulin. And it's probably more, like, injection techniques and things that you're more likely to call them in ...*” (Allison)

The nurses’ described several situations where their behaviour demonstrated that they did not have an understanding of the value of self-management. They would describe how capillary blood glucose monitoring and diet was a high priority in their day-to-day management of patients with diabetes. Medication was also an important consideration, but that seemed to be the extent of what was important in the nursing
care of people with diabetes. Monica demonstrated that she did not have time for more than the monitoring aspects of the disease.

“Well unfortunately you don’t really do much in the way of diabetes education or assessment or anything. You know we sort of come in and we’ve been told they’re a diabetic and that’s sort of just alerts me to regular blood sugar monitoring and that’s really, unfortunately we don’t have the time or energy to sit down and say “what do you do with yourself at home, are you eating properly”, that sort of thing. We don’t get the chance. You know we just we do their blood sugars and tell kitchen that they’re a diabetic diet.” (Monica)

Others were despondent with their perceptions of patients’ attitudes and could not see a reason to bother with more than the basic nursing care. This despondency originated from patients being rude to the nurses as well as from patients’ apparent lack of care about self-management.

“I sort of just got sick of being abused. You know you come to work and then people just wanna yell at you when you’re just trying to do what you can do.” (Ann)

Mary was very vocal about patients’ lack of care for themselves. She was adamant that these people were wasting valuable hospital beds and we, health professionals, should be more mindful of taxpayer’s funds.
“Nurses, doctors, we are using taxpayers money. Why, when we are so short of beds, why don't we give them to people who are really willing to get better, when now we’ve got no beds, and we are admitting those people who are not compliant and they're wasting hospital beds.” (Mary)

The researcher then tried to engage the nurses in descriptions of using the resources available to them. This revealed the next sub-theme developed regarding the utilisation of diabetes educators.

Reticence in Referring to Diabetes Education

The third category of missing the big picture was reticence in referring to Diabetes Education. This category described the nurses’ reasons for referring a person to diabetes educators and why they did not use this valuable resource as often as they could.

While the participants spoke about utilising the diabetes educators, the data reflected that some nurses either accepted that they should be taking the responsibility for health promotion and health education themselves, or that they did not really understand the role of the diabetes educators. They often spoke of only referring patients if the medication route had changed or if their diabetes was “bad”. It was also common for the dietitian to be the first contact which revealed that management of diabetes was not considered as a whole.

“… I think I'd refer if I wasn’t sure about the type of question that they had, I ring an educator at the local diabetes educators centre if I could catch one. If someone was coming in who was quite a bad diabetic, maybe we could get an urgent consult from the dietitian … actually
what we do and what we should do are two different things, we probably
don't refer them as much as we should." (Allannah)

Allison, who was one of the nurses who demonstrated that she mainly succeeded
despite the barriers, reflected that she never thought to refer patients who were not
monitoring their diabetes. This basic procedure in diabetes care was over-looked.

“... to be honest we don't call in the educator quite regularly, and the
clue you said just now about doing their BGLs and things, I guess I
hadn't thought to call in an educator...” (Allison)

Other reasons for missing the big picture were the nurses’ belief that they did not have
the knowledge and skills to provide health promotion and health education. This
category will now be explained.

Paucity of Contemporary Knowledge, Skills and Resources to Care for Patients
with Diabetes

The fourth category of missing the big picture was paucity of contemporary knowledge,
skills and resources to care for people with diabetes. This theme encapsulated
descriptions of nurses having difficulty in either identifying a patient’s need for better
care or to the nurses’ acceptance of changes in management. Contemporary
management of diabetes was difficult for them to accept and some nurses reverted to
practices that they have known and performed for many years. Reverting to old
practices was typically apparent when they needed to react to out of range blood
glucose levels. Allison related her concerns by describing an example of an
inappropriate response to assessment data:
“... someone with a low sugar or something and they're about to give the insulin and you know this is 40 units, I say what's the BGL, it's 2. I think a lot comes down to actually the doctors and the education, I don't think they give them an all over picture.” (Allison)

Peta provided several examples of the inability of colleagues to respond to or manage diabetes appropriately. For example:

“... every so often you find a little example that the nurse has no understanding. Like we had an example of a lady who was an insulin dependent diabetic, and one of the night duty people announced that they'd done a blood sugar at six, and it was two point something, so they gave the lady a drink of diet coke. When I said 'what good would that have done?' she said "well she's a diabetic, you can't give her ordinary coke'…” (Peta)

Another aspect of this category was an apparent lack of respect of the seriousness for diabetes by some clinicians. All of the participants related instances of health professionals displaying a lack of respect for diabetes in some form. Some spoke about health professionals not seeking to manage the disease the way current evidence indicated it should be managed, with some nurses either recognising what was required for optimal care or alternatively they demonstrated their lack of knowledge about what was optimal care. When one nurse was asked what she would do if her patient’s blood sugar was 12mmol/l she responded:

“Well I'd be asking, rather firstly I'd go to the notes and have a look to see whether that's regularly what they get at this time of the day…”

(Ann)
Another when discussing her experiences said:

“... but I have to try to explain if they are the diabetic, if that was little bit up than the normal, was still acceptable…” (Kate)

Elements of *missing the big picture* often interplayed with *struggling to cope*, as *struggling to cope* frequently provided rationales as to why they were *missing the big picture*. Allison provided evidence that focussing on everyday nursing tasks, failing to perceive the importance of promotion of self-management strategies, and reticence to refer to diabetes educator was indeed a reality of the practice of the nurses in this study. She related how she and her colleagues usually called diabetes educators for immediate inpatient issues, but self-management strategies had not been thought of as a reason to seek further information for patients.

“Generally, I find in our ward we refer them to the educators if they’re newly diagnosed, or if they’ve gone from oral onto insulin, if there’s a change. I guess, I haven’t actually really thought to suggesting to an educator, if they weren’t monitoring their BGLs.” (Allison)

**Struggling to Cope**

The second sub-theme, which was revealed from the data, was *struggling to cope*. Elements of *struggling to cope* emerged time and time again. All of the categories were linked to frustration. Much of the data revealed problems or difficulties with the nurses’ work. These categories were strongly voiced among most of the nurses. It was apparent that providing nursing care at the time the study was undertaken was plain hard work. The physical nature of nursing was hard work, and the application of current knowledge was hard to apply. The nurses described being overwhelmed with
the work and with also the lack of sleep from busy shifts and also the 'quick shift' situation. This all made it hard for them to think of providing health promotion and health education. Monica explained a common situation:

“…it’s absolutely drummed into us [at university] this holistic care approach and it’s all a balancing act. Not what it’s like at all, it’s pharmacy, it’s dispensing pills up on the wing and that’s all there is. Yeah you know finish one pill round. … they were short two staff members on Friday so I got called in here and put up there and I left at quarter to five in the afternoon when I should have finished at half past three. … we were running behind right from the get-go and you had twelve patients in the morning to do pills for and you do full care for six of them …” (Monica)

The categories for struggling to cope are all related to frustration. Frustration impacted on nurses so that they were struggling to cope with working on the wards. Frustration and its five sub-categories will now be explained.

**Frustration**

The primary category of struggling to cope was frustration, which consisted of five further sub-categories. The study participants described aspects of their work that frustrated them and said their frustration sometimes inhibited their health promotion and health education activities. The frustrations involved their perception of a lack of education concerning diabetes, the patient’s behaviours relating to self-management strategies, the healthcare system and also the behaviours of their nursing and medical colleagues. Allison, for instance, discussed both patients and colleagues and the frustration she expressed:
“It comes down to actually the doctors, and the education, I don't think they give them [the patients] an all over picture. A lot of them just think, ah that's OK, I just don't have to have sugar, I just won't have lollies, so many of them don't monitor themselves, they don't realise the long-term complications.” (Allison)

**Frustration – Perception of Lack of Education**

The perception of a lack of education frustrated the study participants. The majority felt they were not adequately prepared to provide health promotion information to patients. They expressed a need for further education in adult learning and self-management principles, as well as more on the importance of diabetes management. Some of the nurses interviewed spoke of diabetes being glossed over in formal nursing studies along with other aspects of what the nurses believed to be part of ‘holistic’ care. One nurse gave the example of stress management as a strategy to reduce a lot of disease in the community. It was suggested that this could be utilised by nurses if they had more understanding of strategies to reduce stress. Joanne stated:

“… I mean there's a lot of other health care promotion stuff that's glossed over and one was stress, I'm a real big believer in stress control. Yeah. I mean I think that's a big part of nursing. I mean it's not all just medical and clinical.” (Joanne)

The participants recalled learning about diabetes but said lectures on diabetes were short and it did not appear to have particular importance within curriculum design. When prompted to think about the possibility of diabetes being included in other topics like cardiology lectures they could not relate any experiences.
“I think for me personally, and I think for a lot of other nursing staff, education on diabetes is lacking. Five years ago [undergraduate training], and recently when I was doing my gerontology course we had I think it was one lecture only.” (Allanah)

Another nurse interviewed, who was undergoing her post-graduate year, was disappointed that she was not prepared from an educational perspective to provide more health promotion and health education for people with diabetes. Now that she was working in the hospital system she found diabetes was a common illness, and many of the patients admitted for other health problems, also have diabetes.

“… my lack of education is probably stopping me from probing these questions, and you know, a lot of them up here are reoccurred, revolving door syndrome, when you come in with same thing over and over again, so maybe if I had the education from day dot …, you know Mrs X came in with hypoglycaemia, and I can talk to her a bit more about it or something, it may stop her coming in next week.” (Monica)

**Frustration – with Patients**

The nurses often discussed their frustration with patients. The interviews revealed a frustration with patients for not respecting optimal diabetes management. Examples given included not caring about the long-term complications of diabetes, leaving their diabetes care to others, and using the diabetes to get readmitted into hospital purely for social contact. Interestingly, each participant described situations where they were frustrated with patients. Some identified the reasons why patients were acting in a frustrating manner and had tried to address the issues but others had either given up
on the problem or they did not identify that there was always a reason behind inappropriate behaviour. It was apparent that some nurses perceived that patients don’t want to know how to manage their diabetes, and that “… it's just, like, like, you're talking to a brick wall, …” (Mary)

“Nurses, doctors, we are using taxpayers money. Why, when we are so short of beds, why don't we give them to people who are really willing to get better, when now we got no beds, and we are admitting those people who are not compliant and they're wasting hospital beds. It's just the thing, it doesn't, I don't understand.” (Mary)

From the nurses’ responses it was apparent that while some patients genuinely do not have enough knowledge about diabetes, there were certainly others who could not cope with the practice of optimal management. The nurses spoke of patients adjusting insulin doses according to food intake. The participants believed the patients did this so that they could eat what they liked rather than what was recommended.

“… it's just that 'oh well, I'm hungry, I like this food', and you eat whatever, for example they would say 'oh I'm on insulin, what I can do it's just increase my insulin and my blood sugar will go down'. ” (Mary)

Other participants described patients who just did not bother with diabetes management. According to these nurses patients have reasons why not to care for their diabetes. They didn’t seem to have an appreciation of feeling better and deterring the long-term complications. Monica stated:
“... she doesn't do it, she knows she doesn't do what she's supposed to do at home, you know she doesn't monitor her glucose very well but sort of knows she eats bad but really just says "oh, you know sixty odd, seventy odd", or whatever she was, "I'm gonna die sooner or later" so she's feeling a bit nonchalant about it…” (Monica)

The nurses also provided examples of patients who left the management of their diabetes to their healthcare providers or their carers. Peta revealed she sees instances where patients do this, whether from not knowing about self-management or just relying on their GPs.

“See a lot of them tend to go to the doctor. Then the GP handles everything. Gives them a very broad, 'this is diabetes, this is how it works, do this, do that', you know. And they don't have any understanding, they don't know that they can come to the hospital, that they can speak to dietitians, that they can be seen by the diabetes educators and the card system where they can get things discounted, they don't know about support groups…” (Peta)

According to the nurses interviewed for the study the patients do not fear the long-term complications of diabetes. Several nurses could easily recall instances where patients had repeated admissions with high blood glucose. Often these same patients already had long-term complications of diabetes but still did not heed advice to manage the disease better. Mary recalled one who she had nursed several times. She said:
“... like the Tongan, I told him, that because your kidneys are failing now because of your non-compliance with your diabetes. I notice now, we stabilise it, [and], the renal failure is fine, and then they come back the following month, the same thing, the same man, Tongan.”
(Mary)

Joanna also spoke of a patient’s lack of respect for his diabetes. While Joanna exhibited evidence that she was able to provide health promotion and health education, she was frustrated by some of her experiences with patients’ apparent nonchalance when it came to self-care of his diabetes.

“... he’d made those choices in life when he came to us for surgery. I mean he’d already lost his eyesight, he’d had renal failure, perhaps he lived in denial or wouldn't want to be different you know.” (Joanna)

Finally, the nurses spoke about how they believed some patients, particularly elderly people, preferred being in hospital to being at home because they gained social outlets in the hospital setting. According to some nurses, these patients were lonely and recognised that if their diabetes became unstable their doctor would admit them back to hospital.

“... the social worker found out that she's a very lonely woman, she lives on her own, with no family support, but in here she's looked after properly, there are lots of social things here, and all the nurses know that. And I think that's what's missing on her part.” (Mary)
Frustration – with Carers

The study participants also discussed some frustration with carers. Carers did try to help with their loved one’s diabetes management but their lack of knowledge was apparent to nurses in this study. While the nurses mostly agreed that the carers tried their best to help, sometimes they were unable to recognise the basic signs of hypoglycaemia. This was evidenced in the data by Allison’s comment.

“... the wife said "Oh he does that all the time". And I said "did you realise that it was related?" And she said "oh no he goes quite vague, and no he does that quite regularly". And she said that it wasn't connected to the diabetes, that no matter what happened, they gave that amount of insulin whether he ate, no matter what was happening ...

”(Allison)

Frustration – with Healthcare System

The healthcare system was also a source of frustration for some of the nurse interviewed. The system was blamed for the heavy workloads and consequently the lack of opportunity to provide health promotion and health education for patients. Staffing allocation through the number of patients rather than the acuity of patients, and the wasting of ‘tax-payers money’ (Mary) by repeated admissions of patients who do not look after themselves, are all sources of frustration.

“... we haven't got enough nurses to patient load, and what they're doing is looking at the numbers of how many nurses, not the amount of care that each patient needs. And some nurses might need less patients because they're got more care than self-caring ones. So you're running around doing everything for everybody and you don't
have that time to sit there and try and figure out how much they know about the diabetes and if they come in for the diabetes, why they come in for their diabetes and what caused it." (Anne)

Monica, a first year graduate, spoke about the differences in working in a well-staffed area versus an area where the staffing was always less than desirable.

“'I've done rehab so that was sort of good for discharge planning and things about liaising a lot with, with the physios and occupational Therapists. But, the wing was good but I think it's tough, it's four RNs to forty eight patients. … I mean it's pharmacy, it's dispensing pills up on the wing and that's all there is." (Monica)

Conversely, a nurse with many years experience, described how she dealt with the taxing workload by doing very basic care. Her example was in relation to nursing admissions.

“Contact numbers ... Just the important things, but not the whole nursing history because you don't have time to do it straight away, cause you got other things to do which is important …” (Mary)

**Frustration – with Health Professionals**

According to the nurses, frustration developed with other health professionals, doctors, nurses and allied health. The frustration was due to other health professionals not providing the “over all picture” (Allison) as well as their lack of understanding of diabetes, lack of insight, or critical appraisal of an individual situation. One nurse described an incident where community nurse involvement with a patient was sought on discharge. The patient required assistance with blood glucose measurements while
his family came to terms with providing this aspect of care for their father. The patient was cognitively impaired so needed help. Unfortunately the community nurses saw this as nothing more than the basic chore of BGL measurement. They could not see the whole situation and their possible role in helping this family overcome a major difficulty.

“... the community nurses said that they can't continually visit the patient just for blood glucose levels. I think they, the family, were okay about the insulin, but it was a very different story for the blood glucose levels. So what we actually had to do was, every 2-3 days he had to go to his local GP." (Allan)

Another nurse discussed her frustration with a medical officer who encouraged her to manage diabetes as the problems occur here and now, rather than to also consider the long-term management. This was during a personal experience with diabetes. She found this to be a condescending attitude and did not help her understand the need for optimum management of her son’s disease. This was Allison’s personal experience:

“... I went and got all these books, ... and I was frightened by all the things that I read, and the doctor said 'oh look, don't look at that, don't read that, don't you know, let's cope with the day-to-day of what's happening, don't even look at that. Well I couldn't help but I had to read everything." (Allison)

Succeeding Despite all these Barriers

The third and final sub-theme derived from the data identified what constitutes success in delivering health promotion and health education to people with diabetes.
categories that were common with nurses who succeed in delivering health promotion and health education to people with diabetes were due to personal experiences and professional attitude and standards: a desire to provide quality care. The nurses who demonstrated that they are succeeding despite the barriers were mostly achieving professional goals within their career and this extra interest helped them to be able to demonstrate success. They easily described how health promotion and health education was incorporated into their day despite the issues that obstructed others. Peta was an example of this ease when she not only related how she approached health promotion and health education for people with diabetes, but those who also have another chronic illness that can inter-relate.

“... and if they're a diabetic as well, then you quite often ask them how long they have had diabetes, are they on any medication, do they have any problems, what sort of things do they do at home, how do you know if you're having a hypo. I find those who are on prednisone [for asthma], they've had an exacerbation of their asthma and can be on high doses of prednisone and this can affect their blood sugar and a lot of them just don’t understand this increase their sugar.” (Peta)

Peta also made a profound statement that perhaps sums up what patients, carers and health professionals believe about diabetes. Even though she was referring to patients it seemed like a common thread throughout the interviews and clearly demonstrated that she knew the issues, and had strategies in mind to succeed despite the barriers...  

“One of the things I find is that diabetes is a very complex issue for a lot of people, and they have a certain element of denial, and when they have a denial about their condition, they stay within their comfort
Personal Experiences

Data analysis revealed that several of the nurses had personal experiences associated with diabetes. These experiences appeared to be one explanation for their success in providing health promotion and health education. These experiences were either through having diabetes themselves or through the experiences of significant others with the disease. These nurses believed their personal experience influenced their perspective of diabetes when delivering nursing care. They gave examples of how their formal education and nursing experiences prior to their own personal experience had not provided them with the same insight about the importance of diabetes management. They discussed how their practice had changed to include a more active promotion of desired diabetes care, both in the acute setting as well as for community based management. Allison commented how her personal experience influenced her professional practice:

“... because of my own family situation, it makes it much easier ... I feel as if I'm constantly on a mission ....” (Allison)

Another nurse discussed how her own experience of being diagnosed with diabetes made her more inclined to discuss with her patients the need to manage their diabetes in an appropriate manner. She used herself as an example to show how old habits can be changed but still enjoy life.

“Yes, I always tell them, I say 'I'm a diabetic and that's why I'm telling you these things'. When I was diagnosed four years ago, I made a
decision for myself, to loose weight, stabilise my diabetes, or I could continue eating what was bad for me, or I could go on insulin.’ A person has to have resolve within oneself.” (Mary)

Not only did these participants with personal experiences report being more capable of addressing self-management of diabetes but also they felt more confident in urging other nursing and medical colleagues to treat the disease with the seriousness it deserves. Data revealed that when these particular participants witnessed what they perceived to be less than optimal management they reported being proactive in supporting better practices. For example, Allison recalled an incident where the patient was fasting for a procedure but the patient’s diabetes was not being managed during this period. She explained to the medical officer and her colleagues that an insulin and dextrose infusion was indicated, along with vigilance of the blood glucose levels. She stated:

“… a lot of the doctors don’t understand a lot about the diabetes. These people are still nil by mouth and they’re not being monitored and you’ve sort of got to push more, and luckily we’ve got guidelines and that to go by, and you get out the protocol and say well look, we’ve got a back-up.” (Allison)

Another nurse who was diagnosed with diabetes about four years ago did not disclose that her diagnosis had influenced her nursing care. Her interview revealed that she performed a proactive role in patient education and actively promoted this aspect of care to other nurses who she supported. The nurse was one of only two who could easily and without prompting discuss holistic diabetes management. It was also
evident that she used not only expert knowledge but also personal experiences to promote optimal care of people with diabetes.

“... I knew the complications and so I thought, well, I have to take this. So I've lost 16 kilos and I've applied the GI factor to the diet and all that stuff. Yes, I go walking, and I eat lots of vegetables and a little of meat and count my carbohydrates, I eat lots of vegetables for dinner...” (Peta)

**Professional Attitude and Standards: a Desire to Provide Quality Care**

The data revealed that the quality of nursing care has an impact on opportunities to provide health promotion and health education. Nurses who succeeded portrayed a positive attitude towards their work. They looked for solutions to providing health promotion and health education even when the workload was at its busiest. They did not view health promotion and health education as any less necessary in their day even though the routine nursing tasks were onerous. An example was Didi, who stated:

“... I'd probably, it's hard here to find time, lots of time to sit down and talk to people, I mean the best time to talk to them is in the shower anyway when you've got them in the shower or doing something like that...” (Didi)

Conversely, the less experienced nurses kept coming back to not having time to ‘sit and discuss’ health promotion and health education (Anne, Monica). Even though the researcher probed in an effort to help the nurses recall how they had achieved an episode of health promotion and health education, these nurses could not come up...
with any examples besides a formal session that was specifically focused. It was obvious these nurses are more focused on the everyday tasks and can't think beyond doing that well.

“… too much to sit down, like comfort measures first and then if you have time then you, but here you got all the bits and pieces, toileting problems.” (Sheryl)

Chapter Summary
This chapter has presented results of the content analysis of the qualitative data. The overarching theme was the challenges of providing health promotion and health education to people with diabetes. The sub-themes that made up the theme were missing the big picture, struggling to cope, and succeeding despite the barriers. While some of the nurses involved in the study described aspects of their nursing practice, beliefs and behaviours that moved across each of the themes, the nurses who could describe the successful aspects of providing health promotion and health education had few of the difficulties described in missing the big picture and struggling to cope. Few nurses achieved success in this vital aspect of nursing care.

Clearly, in the healthcare environment at the time of the interviews (1998 and 1999) nursing people with diabetes was a challenge and recent evidence suggests that the challenges to nurses are increasing rather than diminishing (Heath, 2002). The study participant's frustration with their workload, attitudes and behaviours of healthcare professionals and patients, combined with their own lack of knowledge impacted on how the nurses in this study were able to provide care to patients with diabetes.
The data indicated that there were many reasons why nurses did not provide inpatient nursing care with an understanding that diabetes care goes far beyond the walls of the hospital environment. They are not able to think past what was happening during the here and now because they had heavy workloads from a physical and knowledge perspective. They also had stressors from the healthcare system, their colleagues, and the people who seek their care, the patients and their families. Combine these reasons for not providing health promotion and health education with their perception that they are not adequately prepared with a comprehensive understanding of diabetes, and the possible negative impact it can have on an individual’s life, and *missing the big picture* becomes a reality for these nurses.

*Struggling to cope* also had many facets. These included the lack of acceptance that acute care for diabetes has changed. These was evidenced by data revealing the nurses often revert to old practices or do not think about the clinical data when administering nursing care. The workload that the nurses are expected to undertake, and are not supported with by the healthcare system, also demonstrates their struggle. They cope with all these difficulties by dealing with what is happening today, so this then impinges on *missing the big picture*. Rather than thinking about how supporting patients to self-manage can be of benefit to the individual and well as the healthcare system, they deal with only what is the priority today.

Despite the nurses feeling unable to provide health promotion and health education to people with diabetes, they were still reticent to refer patients to the diabetes educators. At times the nurses in the study indicated that they pressured themselves by believing that they should know more and take on this role. They did not realise that referring to resources such as diabetes educators was what they should do to not only ease their
own burden, but to ensure contemporary information and specialised support is provided to the patients and their families.

The following chapter will discuss how the findings of both this chapter and those reported in chapter five, the quantitative findings, further inform or confirm those reported thus far.
Introduction

This chapter presents the integrated findings of the quantitative and qualitative aspects of the study design. As described in Chapter 4, the study has implemented a mixed-method design to determine to the extent ward-based clinical nurses believe they are able to engage in health promotion and health education with people who have diabetes. This design was considered to be useful and necessary in exploring the study question. Previous studies have described nurse’s attitudes to diabetes, but not their perceptions and engagement in health promotion and health education with the patient group. It was determined that a mixed-method approach would investigate the nurses’ behaviours and attitudes more fully. The two discrete aspects of the study, the questionnaire and interviews, were performed and analysed concurrently and considered to be complimentary to each other as illustrated in the following discussion. The choice of mixed methods was not based solely upon validation but also to undertake a more exploratory and in-depth analysis of the study questions.

Triangulated Analysis

The process used to analysed both sets of data together involved firstly to examine and analyse each dataset. Following this a matrix of the key findings in both datasets was undertaken. These were then compared together to see what congruence there was with both and to identify any differences in findings. In the instances of no congruence, the data sets were re-examined to determine if this really was the outcome. In the case of one of the themes from the qualitative data, succeeding despite the barriers, the quantitative data was searched for evidence that indicated the same elements.
However, evidence could not be found and it was deduced that the qualitative data uncovered the theme through the depth of understanding it affords. Following identification of quantitative findings (for example a reluctance to refer to diabetes educators) the qualitative data set was further interrogated to look for explanations of these phenomena. For example it appeared from the qualitative data that nurses who had personal experience with or a specific interest in diabetes were more likely to refer to diabetes educators. On the basis of this finding the quantitative data set was further interrogated using a linear regression model. It was identified that independent predictors of discussing long-term complications with patients and appreciating the big picture were having a friend or relative with diabetes (p<0.0001) and a special interest in diabetes (p<0.0001). Further, level of education predicted the likelihood of discussion regarding long-term complications (p=0.023).

**Overlapping Outcomes**

Qualitative data analysis revealed three main sub-themes from the overarching theme of the challenges of providing health promotion and health education to people with diabetes. These three sub-themes missing the big picture, struggling to cope and succeeding despite the barriers, were also found to have relevance in the quantitative data. This is demonstrated by the following outcomes:

**Missing the Big Picture**

Despite 78% of the nurses surveyed saying they were ‘moderately’ to ‘very familiar’ with the process of referral of patients to diabetes educators, 31% had not referred even one patient to diabetes educators in the three months prior to the survey. This was corroborated in the qualitative data by the nurses relating how referral to diabetes educators was usually done only if patients were newly diagnosed or had been changed from oral medication to insulin therapy. To refer patients for an update of
contemporary information or to encourage self-management strategies was not considered by the nurses to be a reason for referral to diabetes education.

Data revealed that nurses infrequently discussed diabetes self-care with patients. This was illustrated by 75% of nurses in the sample taking the opportunity only less than five times in their average working week. This was despite caring for at least 5 people with diabetes in their average working week. A deep appreciation of how people can be encouraged to be self-managers was not evident in the fact that 23% of the nurses surveyed did not believe that teaching people with diabetes about the physiology of the disease is important. This correlated with the qualitative data, which revealed a category within missing the big picture that the nurses did not perceive the importance of promotion of self-management strategies. This was evidenced by their focus on everyday nursing despite the researcher trying to elicit information from them on strategies they may employ while completing their everyday nursing tasks. Alongside the nurses belief that their heavy workload (66%) impinged on their decision not to engage in discussing diabetes management with their patients, these outcomes revealed that many nurses who work in wards within the hospital environment do not have an understanding or give consideration of people living their lives with diabetes.

**Struggling to Cope**

The quantitative data was rich with evidence to align with this theme. Included in their reasons for not engaging in discussion regarding diabetes self-management was the diversity of the patient’s languages (71%), workloads, and the patients’ own the nurses as being significant cited barriers. The nurses believe patients often find the disease too hard to manage (77%), and that diet (71%), exercise (82%) and blood sugar monitoring (88%) is not something that patients can do. Adding to this was the fact that 45% of the nurses believe that the patients were just not interested. These quantitative
findings were confirmed in the qualitative data as nurses frequently suggested that their heavy workload was contributing to them not discussing self-management. *Frustration* with the workload, with the system, with their administrators, with patients, and also with their nursing and medical colleagues, all featured in the qualitative data and were factors that supported that the nurses were *struggling to cope*. Interestingly, only 22% believed their knowledge about current diabetes management was an issue. However, some of the questions regarding diabetes management and the long-term outcomes revealed a lack of knowledge. An example is that only 61% of nurses believe Type 2 diabetes is as serious as Type 1, and 24% said that peripheral neuropathy is not a long-term complication. This lack of insight has significant implications for model of care development and professional education.

**Succeeding Despite the Barriers**

The final sub-theme, *succeeding despite the barriers*, developed from small but important interview data. This sub-theme revealed that some nurses could *see the big picture* and could easily cope with working on the wards. *Succeeding despite the barriers* was not immediately apparent in the quantitative data and item generation for the interviews, through the literature review, did not determine a need to explore this issue. The lack of identifying a need to explore what constituted *succeeding despite the barriers* from the quantitative data affirms the value of the study design. The nature of the interviews generated qualitative data that was able to elucidate these latent but important explanations. Qualitative research methods are able to capture in-depth and richer understandings of a phenomenon; and allow participants to divulge information when a trust and rapport exists between themselves and the researcher. Quantitative questionnaires do not have the flexibility to be directed by participant’s responses unless anticipated in advance. The example of elucidating *succeeding despite the*
barriers, illustrates the complimentary and reflexive nature of the data collection methods.

Table 7.1 summarises the congruence between questionnaire and interview data.

**Table 7.1: Congruence between questionnaire and interview data.**

<table>
<thead>
<tr>
<th>The Challenges Of Nurses Providing Health Promotion For People With Diabetes Who Are Hospitalised</th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nurses’ Understanding of Diabetes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than desirable understanding of diabetes</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Under-appreciate the seriousness of diabetes</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>There should be more emphasis on primary prevention of diabetes</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Nurses’ Perceptions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurses believe they are not educationally prepared to adequately provide Health Promotion and Health Education for people with diabetes</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Nurses’ Attitudes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patients have a lack of understanding of diabetes</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Patients are often not interested in learning about their diabetes</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Referral of people with diabetes to specialist educators is a doctors or other professions role</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Health Promotion and Health Education for people with diabetes is more of a role for dietitians</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Nurses’ Behaviours</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While nurses know how to refer and believe in the worth of referral to diabetes education, they do not actually refer as often as they have opportunity to do so</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Most nurses assess themselves as able to provide health education to patients with diabetes but few actually do it</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Overarching Themes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing the big picture</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Struggling to cope</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Succeeding despite the barriers</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Barriers Include</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of time, workload, language barriers, sometimes uncertainty with what is current management of diabetes and patient not interested</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Conclusions

Using a mixed-method approach has allowed more indepth examination of the research question and related issues than using a single method. The complimentary study design allowed the qualitative data to enrich and inform the questionnaire results. The design allowed derivation of information concerning situations in which nurses are confident in their behaviour of providing successful health promotion and health education. An understanding of nurses’ confident behaviours towards providing health promotion and health education for people with diabetes was difficult to determine from the quantitative data, even though the questions tried to address this issue. The evidence of confident behaviours confirms the research design as being appropriate to fully understand the research questions. While it is obvious that many nurses do provide health promotion and health education, and indeed most believe they are capable of health promotion and health education, the majority of nurses in the study did not appear to perform these tasks optimally. Both methods of data collection found evidence to support this conclusion as shown in many ways, but obviously through their reported under-utilisation of diabetes educators.

The challenges for nurses when providing health promotion and health education for people with diabetes who are hospitalised were related to nurses’ perceptions, behaviours and system barriers. Both the quantitative and qualitative data supported these challenges on all but one situation, succeeding despite the barriers. These are shown on table 7.1.

Chapter Eight will discuss the integrated findings of the research data analysis and their impact upon nursing and specifically promotion of self-care strategies.
CHAPTER EIGHT

Discussion

Introduction

The study was undertaken in order to explore behaviours and attitudes of nurses towards health promotion and health education in relation to people with diabetes. Ajzen and Fishbein’s Theory of Reasoned Action (1980) guided the mixed-method descriptive, exploratory study. At the time of when the study was undertaken, published data revealed that significant attitudinal barriers existed, impacting on health professionals’ management of diabetes (Anderson et al. 1991; Loveman, Royle, & Waugh, 2003; Roman, Haddow, & Chassin, as cited in Linekin, 2001). Explanations for these attitudes have been attributed to perceived poor patient adherence to long-term self-management strategies (McDonald et al. 1999), a lack of time to discuss health promotion and health education (Moriarty & Stephens, 1990), a lack of education or knowledge of diabetes (Banks & Logsdon, 1998) and a task orientated approach to nursing care that does not include health promotion and health education strategies (Trocino et al. 1997). Subsequently, studies have been conducted to assess nurses’ knowledge and also educational programs in efforts to address this lack of understanding (Cotterell, 2000; El-Deirawi, & Zuraikat, 2001; Hjelm et al. 2003; Uding, et al. 2002). In addition to the published literature it is the observation of the researcher in her role as a cardiac rehabilitation nurse that many people with diabetes do not optimally self-manage their condition. Many of these patients admit to not having had the benefit of the expertise of diabetes educators despite recent admissions to hospital, even when poor management of diabetes precipitated these hospitalisations. As a consequence of personal observations and a systematic literature review the study was conducted to further understand the attitudes and
beliefs of nurses and explore the barriers and facilitators in providing health promotion and health education in this group.

This chapter will discuss the study findings within the context of the existing body of knowledge and provide recommendations for clinical practice, research and scholarship.

What the Data Revealed
Key findings from this study are described by the themes ‘missing the big picture’, ‘struggling to cope’ and ‘succeeding despite the barriers’. These main themes can be explained by the theoretical framework utilised to guide the study, the Theory of Reasoned Action described by Ajzen & Fishbein (1980). The nurses’ revelations of what actually happens in their practice are related to attitudes that are embedded in their own personal beliefs and also what is socially acceptable in nursing culture. Furthermore, their descriptions of what they do, indicates that their attitudes and intentions are consequently acted out through their interactions with people who have diabetes. This has previously been shown in other studies of nurses’ attitudes and behaviour (McKinlay, Couston & Cowan, 2001; Wallace et al. 1997; Werner & Mendelson, 2001). It is apparent from the study reported here and others, that behaviour is related to attitudes, and personal and collected norms.

Attitudes and Behaviours
The mixed method study approach has proven to be beneficial in confirming the attitudes and behaviours of the nurses who participated in this research. Furthermore, not only have perceptions been documented but also an attempt has been made to describe and explain the reasons for these perceptions. Attitudes and behaviours derived from the questionnaire results were confirmed and expanded upon in the
interviews, which provided a greater understanding of the nurse’s attitudes and their subsequent behaviours. This elucidation of the phenomenon was in congruence with what other researchers and theorists have found using this triangulated approach (Berglund & Ericsson, 2003; Drennan, 2002; Foss & Ellefsen, 2003). In this study both methodological approaches illustrated the multifaceted nature of interpreting nurses' attitudes to health promotion and health education.

The study findings illustrated key issues that impact on providing health promotion and health education to people with diabetes in the inpatient setting including:

1. Personal experience with diabetes.
2. Limited experience in nursing.
3. Perceptions about nursing study content.
4. Incomplete understanding of self-management (missing the big picture).
5. System issues (struggling to cope).
6. Succeeding despite the barriers.

These key issues will be further explored in the discussion below.

**Personal Experiences**

Personal experience with diabetes was noted and discussed from the perspective of their individual experiences of living with diabetes or through a close relative living with diabetes. This finding was substantially revealed during the interviews and while not all those who talked about their personal experiences had a positive attitude to providing health promotion and health education, it shifted their attitude to being more positive in most instances. Nurse’s personal experiences helped them to have a greater awareness of the issues faced by people who have diabetes. This included the daily need to monitor their condition and to follow through with recommended habits. It also
brought to the forefront the risk placed upon them of developing catastrophic long-term complications. Dealing with these issues on a daily basis helped some nurses to understand how hard it can be for patients to follow the same routines, and that support and information is vital. Additionally, personal experience with diabetes often empowered the nurses to encourage health promotion and health education strategies amongst their colleagues and other health professionals.

While *personal experience* was a theme that produced a positive outlook on providing health promotion and health education to people with diabetes, there were some exceptions. These few nurses with personal experiences discussed long-held beliefs that people with diabetes are not interested in helping themselves. The nurses in this exceptional category found their personal experience made them more aware of people who would increase their doses of medication to deal with indiscretions. Additionally they were also more aware of those who would allow problems to occur so that they can be re-admitted to hospital where meals, a warm bed, and social contact are available at all times. While these nurses would sometimes refer these patients to social workers they often left referral to diabetes educators or other colleagues, e.g. the nurse unit manager, or to the systems set up in their hospitals, that are in place to see that all people with diabetes are reviewed by the diabetes educators. Recidivism was viewed as the patient’s unique problem and unravelling the reasons for this was not seen as a responsibility of nurses.

To date, personal experience as a reason for either positively or negatively impacting on providing health promotion or health education to people with diabetes has not been documented in the nursing literature. Being able to present unbiased, objective information in health promotion and health education encounters is a challenge, especially for those nurses who have personal experiences.
**Experience as a Nurse**

The powerful effect of socialisation was evident in the study. Inexperience in nursing had an impact on producing behaviours that were collectively perceived as being acceptable to nurses even though in some instances personal beliefs were to the contrary. While workload appeared to influence this, the inexperienced nurse felt she had to move on with the ‘real nursing’ work. This was in spite of feeling guilty at not having time to assess patients appropriately for their health promotion and health education needs. The study revealed evidence of novices, nurses with less than one year experience post-graduate, being given independent workloads well before they felt confident to take on this role (see Monica, p. 107). This finding is consistent with the findings of Benner, Tanner and Chesla (1996) who describe advanced beginner nurses as anxious and concerned about their level of competence when dealing with complex situations.

The research results underscore the need and importance of improved support and preceptorship of novice nurses. These nurses need to be supported and shown how the broader nursing role can include aspects of care including health promotion and health education while doing ‘the chores’. As has been discovered in anecdotal situations as well as in research, nurses need to determine ways to do this in a more satisfying manner for the novices, rather than as witnessed in the busy ward setting (Fagerberg & Kihlgren, 2001). These authors reported that their participants discussed how two years after graduation they required preceptorship in some form, let alone on a daily basis for the newly graduated nurse.

**Education Program Content**

Few of the nurses in the study had sought any professional education since their undergraduate course. This indicates a possible lack of the professions’ understanding
of the importance of ongoing education for both professional and personal
development. The research also revealed a need to highlight diabetes more in
education programs, at both an under-graduate and post-graduate level. Study
findings revealed a perception of insufficient coverage of diabetes and related topics in
undergraduate programs, with many nurses expressing a need for more focus on how
diabetes impacts upon other disease processes. There was evidence that nurses
failed to realise the impact diabetes has on individuals and society (Dunstan et al.
2002). Further, there was a lack of appreciation of the potential for
health promotion and health education to influence the uptake of self-management
strategies (Hornsten, Norberg & Lundman, 2002; ICN, 2000). Education programs
need to place an emphasis on care across the continuum and emphasise strategies to
promote self-care, thus avoiding the deleterious complications of diabetes (AIHW,
2002; Hjelm et al. 2003).

The findings of a need for more nurse education, both from a diabetes and health
promotion perspective, are well supported in the nursing literature and have formed the
basis of explaining the reasons why health promotion and health education is lacking in
nursing care of people with diabetes. Baxley et al. (1997); El-Deirawi and Zuraikat
(2001); and Hjeml et al. (2003) underscore the importance of education and awareness
strategies for nurses.

**Missing the Big Picture**

The propensity for many of these nurses to ‘miss the big picture’ was a major theme
derived from both the quantitative and qualitative data. This theme reflects a lack of
appreciation of the need for self-management to prevent or deter complications for
people who have diabetes. The nurses were obviously dealing reactively to immediate
issues facing the patient and the demands of their own working day. It seems common
that thoughts about how the patient manages outside the walls of the hospital are minimal, with the reasons for this being multiple, and not least of all is their workload.

As healthcare changed focus over the last decade towards earlier and earlier discharge from the hospital setting, the patients nursed are sicker and there are fewer opportunities to consider health promotion and health education during the everyday nursing workload (El-Deirawi & Zuraikat, 2001). Thus the nurses have to be aware of taking opportunities when performing everyday tasks.

The novice nurses in this study report being overwhelmed with considerations of safe practice and completion of basic tasks, whereas the more experienced nurse, in most situations, is just not realising that opportunities can be made. Making opportunities was demonstrated by those few who demonstrated the theme ‘succeeding despite the barriers’. These findings are in congruence with Benner’s descriptions of novice nurses and of those moving along the path to expertness (Benner, 1984).

It was revealed throughout the research that many nurses still provide care under the understanding that patients are not real partners in their care, rather they should follow instructions given by health professionals and any reasons for deviating from this is not considered. Choices for patients are sometimes not considered, with reasons for behaviour that could be detrimental to long-term health often concluded as laziness and a need to follow indulgent behaviours. The data revealed much evidence of nurses’ perceptions of patient’s ‘bad’ behaviour. This was evident in both qualitative and quantitative data. These findings are in contrast to other reported studies that show partnerships with the people who seek our care are more likely to adopt healthy lifestyle choices and other self-management strategies (El-Deirawi & Zuraikat, 2001; Hornston, Norberg & Lundman, 2002; Kenyon & Barnett, 2001; McQueen, 2000).
When considering self-management strategies and ways to help patients become more aware of why and how to help them adopt better health practices, it was interesting to note that some nurses did not believe disease physiology is an important topic for patients. It was evident that some of the nurses were unable to see how validated theories can sometimes help understand how people behave and thus give some guidance to clinical practice. Some failed to see the utility of these theoretical frameworks in informing practice. A greater appreciation of conceptual, psychological and behavioural issues may help nurses be more understanding of the patients’ dilemma in maintaining positive self-management strategies. This increased understanding may then lead to more efficacious facilitation of positive behavioural change (Ajzen and Fishbein, 1980). The influence of nurse’s attitudes on patients’ behaviours has not been well described in the nursing literature. Appreciating the ‘big picture’ issues may result in nurses seizing the potential for nursing interventions in patients with diabetes. For example; brief health promotion and health education interventions have been conducted successfully for people who smoke and are hospitalised for short periods (Gomm, Lincoln, Egeland, & Rosenberg, 2002).

**Struggling to Cope**

This was a common theme that was demonstrated throughout all the data collection and included some of the issues discussed in ‘missing the big picture’. Nurses demonstrated being overwhelmed with their workload and the acuity of the patients under their care. This was also evident in a study performed by Tummers, Landeweerd, & van Merode (2002). In this study nurses blamed administrators who they perceived did not consider acuity rather just the numbers of patients. In this study nurses described how their voice was lost to administrators and frustration was very evident. In addition to the frustration identified with the system, there was also frustration with patient’s behaviours, the language barriers, with the acuity of the
patients, and with doctors who admit patients who are recidivists. Visitors were also sometimes perceived as a source of annoyance as they obstructed efforts to deal with the workload. Many of these issues have previously been described (McDonald et al. 1999). However, the literature reviewed in relation to health promotion and health education has not discussed re-admissions of recidivists or visitors being an obstacle to health education and health promotion for people with diabetes.

**Succeeding Despite the Barriers**

*Succeeding despite the barriers* was demonstrated by some of the nurses who could easily relate how to utilise daily nursing duties like showering time, bed-making, and the medication round as opportunities for patient education. These opportunities were frequently described in the interviews conducted with nurses who fitted this category, and could also be seen in prose comments in the questionnaire. These nurses were obviously able to deliver nursing care from a holistic perspective. Conversely, those who weren’t succeeding despite the barriers could be easily identified, in spite of their level of experience. These nurses spoke a lot about workloads, patient complexity and acuity, and administration misunderstandings.

**Relationship of the Study Findings to the Theory of Reasoned Action**

The findings of the study have aligned with the Theory of Reasoned Action as developed by Ajzen and Fishbein (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980; Ajzen, 1985; Ajzen, 2001). The relationships of these findings to the theory are shown in figure 8.1.
As discussed in Chapter Three, the Theory of Reasoned Action purports that behaviour is predicted by our attitudes and beliefs. Our attitudes and beliefs are informed through personal and social experiences. The social group that is referred to by Ajzen and Fishbein informs these social experiences as ‘social norms’. That is, the way a social group is expected to behave. In any one given situation an individual decides what action (behaviour) to take depending on which aspect of attitude is prevailing at that particular time.

Accordingly, the study’s findings revealed that nurses often make personal choices (attitudes) that they believe will produce a positive outcome, but the social norms also have a big impact on what they do. Acting on social norms is demonstrated with the culture of performing and thinking about how to do the immediate acute care tasks without consideration of how to incorporate a basic element of health promotion into these activities. If health promotion and health education activities are considered key
nursing activities they are often not acted out as the social norms expect completion of acute care tasks. Another common example is the frustration that is felt towards patients regarding their perceived lack of understanding of their disease and possible outcomes, and the perceived lack of appropriate self-management of their disease. However, this is a personal and a social norm.

The socialisation of nurses described here indicates a powerful negative influence on novice nurses. The negative impact is confirmed from the data described previously that shows the novice nurse is busy being concerned with doing the acute care chores within expected time frames and without making mistakes. While this behaviour from the novice is to be expected (Benner, 1984; Bonner, 2001), nursing needs to consider strategies that will help change this stance, and provide support for our novices so that they may develop to deliver nursing care from a more holistic perspective.

When considering the final step of the Theory of Reasoned Action, behaviours and responses, there are several outcomes of the study that indicate these attitudes have predicted behaviour. The first is the lack of action in referral to diabetes educators. This was evidenced in both the qualitative and quantitative data and supports the data from a diabetes centre reviewed prior to the data collection of this study (Diabetes and Endocrinology Ambulatory Care Centre, 1996). During the interviews it was confirmed that everyday tasks were the focus of the nurses’ work, with consideration of incidental discussions on health promotion and health education not often considered in the busy ward environment. The nurses gave many examples of this reality. The categories of ‘frustration’ and ‘struggling to cope’ with their work provided evidenced through examples of how they skimmed on many tasks in efforts to get through the day. They spoke of how these issues impacted on considerations for health promotion and health education.
The final component of attitudes predicting behaviours was evidenced in those who succeed despite the barriers. It was evident in the interviews that these nurses are gaining a lot of job satisfaction despite the barriers. Their stories remained positive and they could easily relate many examples of how they provided health promotion and health education in their daily work. Prompting from many angles by the researcher resulted in easy story telling.

What does all this Mean?
There are several aspects to consider from this study. Firstly, the study findings confirm attitudes and behaviours that were suspected anecdotally. This will now be discussed and how this information can impact upon nursing as a profession and also the outcomes of people who seek our care.

1. Why are Nurses not Providing or Assessing Patients for Health Promotion and Health Education
This study documents the reasons why nurses are not providing health promotion and health education for people with diabetes, and not referring these patients for specialist diabetes education. Of importance is the nurses’ inability to recognise that these activities can be performed concurrently with other nursing duties. Nurses in this study did not appear to see that health promotion and health education are not isolated, discrete activities and there is not necessarily a need to take time out and sit with a patient to specifically perform these activities. For example blood glucose levels (BGL) are measured repeatedly during inpatient periods, medications have to be administered, and patients need to be showered, often with assistance. These are all important opportunities to assess the health promotion and health education needs of individual patients and provide information on the basis of this assessment. Additionally, many nurses believe that it is not within the nurses’ scope of practice to
refer patients to other health professionals, so as a consequence, the referral to diabetes educators is hampered. Seven hospitals in total were involved in this research and all had referral processes to diabetes educators in place, as confirmed by the nurses, yet both methods of data collection revealed a dearth in referrals. Some nurses believed referral to dietitians was needed but never thought about diabetes educators. Others pointedly said it was a doctors’ role to undertake such referral.

The literature review conducted to guide this study did not reveal any of these factors. There is much evidence regarding the need for more nurse education on diabetes (Cotterell, 2000; El-Deirawi & Zuraikat, 2001; Hjelm et al. 2003; McDonald et al. 1999; Uding, 2002) and one study found problems encountered by patients and their families in diabetes management obstructed the nurses’ health promotion and health education strategies (McDonald et al. 1999). However, under-utilisation of opportunistic episodes of health promotion and health education for people with diabetes, while has been highlighted in the medical literature, has not been published in the nursing literature reviewed.

2. **Poor Understanding of the Value of Self-Management and Potential for Complications**

The study also highlights that despite many opportunities to learn about the importance of self-management strategies (Cotterell, 2000; NSW Health, 1996; NSW Health, 2004, many nurses do not avail themselves of these learning opportunities and as a consequence fail to a incorporating these philosophies in clinical practice. While they recognise that patients should be involved in all aspects of the decision-making processes regarding their care, this was not evident in the behaviours of nurses in this study. This view is further supported by the documentation of nurses’ perception that patients do not necessarily need to know about the disease pathophysiology. The
focus of nursing care remains in the ‘routine’ tasks, such as getting through the showers, bed making and medication dispensing. Interviews revealed only limited occasions when nurses educated patients about self-management of their disease and the benefits of self-management. To many nurses it appeared to have not entered their thoughts that this was an important facet of assisting individual patients to optimise their quality of life, as well as assisting society in general in containing our health costs. Rather some were quick to judge patients for poor care strategies and were surprised when it was suggested that certain strategies such as asking about usual home habits regarding BGL checks, could give them a trigger for referring to diabetes educators. Furthermore, a lack of understanding or application of behavioural theory is evident and this has significant implications for chronic disease self-management and behavioural change (Donaldson et al. 2000 Elder et al. 1999; Hjelm et al. 2003).

**Confirmatory Knowledge Provided**

**Further Education**

The nurses did indicate a need for more education concerning the diabetes disease process, its subsequent long-term complications, contemporary management, as well as strategies that support self-management of the patient’s disease. An example to demonstrate their need for further understanding of diabetes is shown in figure 8.2. While the nurses displayed an understanding of many of the concepts related to diabetes, it was disappointing to find that a number of nurses in this study did not have an appreciation of the seriousness of Type 2 diabetes. The failure to appreciate the severity of Type 2 diabetes is of particular concern given the current burden of disease and increasing prevalence as described in Chapter One.
Unfortunately, the data showed that nurses are not accessing professional education at any level, including any with a nursing focus, let alone anything that specifically relates to diabetes. Very few were studying at the time of the data collection in 1998, and few had sought to achieve any post-graduate education. It is suspected that in 2004 this is probably more of a problem as tertiary education becomes more and more expensive and as the world-wide nursing shortages impact upon workloads (Heath, 2002). Within the context of a worsening global nursing shortage it is imperative that government and professional bodies need to place more emphasise on accessibility and equity of educational opportunities to encourage not only under-graduate training in nursing but also an attitude of life-long, post-basic education. Life-long education encourages not only updates on current issues within nursing but also promotes a critical mind of the care given day-to-day (Simpson & Courtney, 2002; RCNA, 2004). Within the context of further study in particular, perhaps a strategy to help in the understanding of living with a disease, the profession should give nurses who have personal experiences of the various disease processes an opportunity to share these with their nursing colleagues. The nurses in this study who had personal experience had a different and unique perspective of the disease than most of the nurses who had not had a personal experience.
experience. There was evidence that these nurses had significant insight into the experience of living with diabetes. Perhaps more importantly these nurses had a greater appreciating of the long-term complications of living with diabetes.

**Poor Continuity of Services across all Healthcare Settings**

The study revealed that acute care nursing practice in the hospital setting did not appreciate the value of early interventions to support on-going care in the community setting. Previous health literature and government reports have long recognised the need to foster a continuum of care (Lindsey, 1997; NSW Health 1996; NSW Health, 1997; Sullivan, Weinert, & Cudney, 2003; WHO, 2002). Few nurses in the study could demonstrate that they were active in ensuring continuum of care post discharge from the hospital environment. Evidence was manifested in the paucity of referrals to diabetes educators and also through evidence of poor discharge planning. A novice nurse was distraught that this is not common practice as she had been taught at university, and admitted that the work culture did not allow her to follow this through in the clinical setting. The focus is on doing the ward activities in a timely manner. Matters such as discussing discharge plans with a patient receives such a low priority that more often then not it just doesn’t happen. Time, in her experience, did not allow for discussion. Other nurses confirmed this sentiment, as did the questionnaire outcomes.

**Impact on Unique Population**

These results are disturbing considering the unique population groups of Western Sydney. As described in Chapter One, 35% of the population in the area where this study was conducted were born overseas and 1.3% are indigenous Australians (ABS, 2002). Both these groups are known to have high incidences of diabetes (AIHW, 2003). The study data informs that languages, other than English are a major barrier
for nurses to provide health promotion and health education, yet they also say that the time to wait for healthcare interpreters is not acceptable.

**Informing the Nursing Profession**

The study results provide many messages that nurses at all levels should take notice of efforts to improve the care received by people with diabetes who are hospitalised. The messages need to be listened to and acted on at these many levels for any of the actions taken to have an impact. Administrators, managers, educators, and clinical nurses at all levels need to work together to improve health outcomes in this group.

Firstly, the nursing profession must recognise that patients in the inpatient setting will be of high acuity and the nurse-to-patient ratios need to consider this fact. To improve these ratios more nurses are needed to work within the system and thus the conditions in which nurses work and the availability of nursing education has to be improved. Governments need to consider tertiary nursing education as a high priority and make it accessible from a financial perspective. High university fees can be a significant barrier to nurses undertaking ongoing education. Those who can afford high fees are more likely to enter the so-called ‘white-collar’ professions and therefore professions like nursing will only decline in numbers more and more. Other studies have also shown that the nursing workplace conditions have to be improved (Carpenter et al. 2004; Hegney, Plank, & Parker, 2003; Vale et al. 2003) if we are going to recruit and retain our nurses.

Secondly, nursing needs to consider placing more emphasis on including the patient in their healthcare decisions and actions. While it is recognised nurses do this to a degree, this study confirmed that the ‘nursing work’, the day to day jobs of a busy ward setting, have more priority than discussing self-management strategies with patients.
There are ways of performing these health promotion and health education tasks while still getting on with the other usual tasks, as exemplified by those nurses who fitted into the theme ‘succeeding despite the barriers’. Nursing needs more evidence to convince them that self-management can be successful by helping people benefit with higher quality of life, less complications to their disease, and thus less unplanned admissions to hospital.

Thirdly, the profession and healthcare in general needs to place more effort in culturally appropriate resources. Considering all the difficulties nurses are encountering in health promotion and health education strategies, it must not be forgotten how this impacts on those who are already disadvantaged through language and other cultural issues. Thus we need to place resources into developing a variety of mediums to reach this large population group. Translated and visual material is a good start in supporting this group of people to understand the benefits of better self-care (Wilson, Racine, Tekieli, & Williams, 2003). Additionally, the power of indigenous and multicultural health workers cannot be under-estimated. To have a contemporary alongside a patient who does not comprehend the system they find themselves having to interact with, can in the least reduce anxiety and thus begin the process of understanding (Wilson, Racine, Tekieli, & Williams, 2003).

Next, nurses need to become more aware of their ethical and professional responsibilities regarding ongoing self-education. The study indicated that this cohort of nurses has had little formal post-graduate education and few updates on diabetes care. However, the study did omit to ask the nurses of any clinical updates such as regular conference attendances, so the comments here relate only to formal courses and brief ward-based diabetes updates. What can be deduced is, that if the study outcomes are any indication of how nurses approach on-going education, there is a lot...
more to accept as our responsibility. Nursing wants to be known as a ‘profession’ (Gerrish & McManus, 2003) so nurses need to consider earning this privilege and thus provide up-to-date management for patients seeking our care.

Finally, part of professional development needs to emphasise understanding how and why people behave as they do when it comes to their health. Even a basic overview of behaviour theories can help nurses think beyond non-adherence. The data indicates that nursing is performed according to the ‘now’ needs rather than considering the big picture. None of the elements of the Green et al. (1980) model of health promotion or any other behaviour change theory was utilised, except by those few nurses who were succeeding despite the barriers. Nursing is a social phenomenon (Foss & Ellefsen, 2002; Risjord, Moloney & Dunbar, 2000) so a basic understanding and practice of how adults are motivated to utilise healthy behaviour skills is imperative to capture favourable responses.

The study findings could be utilised by nursing as a trigger for several strategies. Firstly, consideration that nurses are not relating to diabetes care because most people are admitted to hospital with diabetes as the co-morbid condition. Therefore its management is not a priority because it is not the focus of the admission. As the reasons for admission are often related to the long-term complications of diabetes (AIHW, 2002) nursing needs to place more importance on understanding these long-term complications. Nurses’ lack of understanding has been evident in the health literature for many years (Anderson et al. 1991). If a focus is made on how these situations, vascular and neural, affect a person’s life, then nurses will see worth in health promotion and health education activities as a responsibility of all health professionals. Alerting nurses to the affect the long-term complications can have on a person’s life should also help nurses understand the seriousness of Type 2 diabetes.
Many in this study have not perceived this fact, possibly because of the quick demise of those with Type 1 diabetes without regular exogenous insulin. Type 2 diabetes is one of the ‘silent killers’ (Schrof, 1999) and the nurses have not accepted the seriousness of this fact.

While impressing the seriousness of diabetes upon nurses we must also support them by not expecting them to be ‘experts’. Some of the nurses interviewed exhibited that they had the expectation of themselves to be experts. This is where the referral to diabetes educators must be incorporated into their everyday practice. Referral should be part of the early preparation for discharge (Bligh, 1994; Cotterell, 2000; Linekin, 2001). If referral to diabetes educators could become part of normal ward duties then their part of the continuum of care will be achieved.

**Implications for Cardiovascular Nursing and Secondary Prevention**

As a specialist cardiac rehabilitation nurse, the researcher can utilise these findings to support ward-based nurses to provide basic health promotion and health education for all patients who require an understanding of cardiovascular secondary prevention strategies. Cardiac rehabilitation specialists and diabetes educators need to ensure the message is in all ward areas regarding the support they can give the nurses. It is an ethical and professional responsibility that nurses utilise the services established across all healthcare settings to enhance patient’s self-management strategies. Additionally, there is a need to inform ward-based nurses about potential learning opportunities, both locally, with provision of in-service programs, and outside of the workplace. While nurses need to accept responsibility for their on-going educational needs as part of their professionalism, managers and budget allocations need to support their attendance. Many reviews and recommendations of services have indicated the need for collaboration across all healthcare settings, in efforts to support
people with chronic conditions to accept and maintain better health practices. Some of the reviews of service are listed in table 1.1. Others include the Health Council Report (NSW Health, 2000) and Cardiac Rehabilitation standards (NSW Health, 1997).

Limitations of the Study

It is recognised that there are several limitations to the research. These include the following:

Firstly, the data collection phase was conducted in late 1998 and early 1999 so is now somewhat dated. Even so, it is recognised that the issues identified are probably compounded in 2004 due to the ongoing and further decline in the number of nurses working within the health system (NSW Health, 2002). The established culture of a lack of peer support at the bedside has had an enormous impact on nurses’ morale and thus their keenness to change the way they have traditionally thought and behaved regarding patient self-management strategies (Baille, Allen, Coogan, Radley, & Turnbull, 2003; Hoffman & Scott, 2003). Despite a lot of attentions being given to this aspect of healthcare at all levels of our system, the nursing numbers continue to decline while education costs escalate.

Secondly, the response rate to the questionnaire was low at 42%. Literature reviewed prior to commencement of data collection revealed an average response rate reported in a refereed Australian nursing journal in the previous four years was just over 60% (Speerin, 1998). The range was 25-90%. However, 138 nurses did respond to the questionnaire. When considered in combination with the qualitative data, this is a significant number of nurses to draw the conclusions.
Thirdly, it is recognised that this sample size is a good representation of the nurses who work within medical and surgical wards of Western Sydney. However, the results cannot be generalised to nurses outside of this geographic region. Additionally, the qualitative data derived from the individual interviews, provided some in-depth information about the attitudes, beliefs and behaviours of nurses working within Western Sydney, but their stories can’t be transferred to the greater nursing population within or outside Western Sydney because of the study design.

A further limitation of the qualitative data is that each nurse was only interviewed once. Saturation of themes was nevertheless reached as no new themes were revealed during the final conceptual process of analysis. Confirmatory interviews did not take place with those nurses previously interviewed.

Other limitations of the questionnaire included the failure of some nurses to answer all the questions. In addition, it appeared that some nurses had quickly answered the questionnaire and not given due thought to their answers. It was noted that some nurses’ omitted to give any prose answers when given the opportunity.

**Strengths of the Study**

In addition to the limitations previously described, the study had several strengths. Firstly, within the context of increasing burden of chronic disease globally it is critical that nurses determine the barriers and facilitators to providing health promotion and health education so that every opportunity is taken to help patients self-manage their disease. Secondly, the study design, informed by a comprehensive and eclectic literature review, provided not only the opportunity to obtain information regarding nurses’ attitudes and beliefs but also a mechanism to probe into the reasons for their attitudes and beliefs. Thirdly, and perhaps most significantly, the study design enabled
not only the documentation of problems and limitations of providing health promotion and health education for people with diabetes, but through the qualitative data, solutions emerged to the problem. The study identified a group of nurses who, albeit similar obstacles, were able to defy the odds and succeed in spite of the barriers. From this group of nurses we have much to learn.

**Tension between Acute Care and Chronic Disease Paradigms**

Many of the tensions and conflicts in the study emanate from the inherent tensions between the acute care and chronic disease paradigms. These tensions have been well documented in the Menadue report (NSW Health, 2000). The Menadue report, highlighted a health care system failing to meet the needs of people with chronic disease, has driven an agenda of reform in the Chronic and Complex Care Programs. The increasing burden of chronic disease mandates consideration of alternate models of care and significantly incorporation of self-care strategies in all facets of health care delivery from primary to tertiary care. Ignoring diabetes as a significant condition in the acute care setting likely diminishes its significance in importance for the patient and their families. Failure to promote self-care behaviours likely hastens individual’s progression along the illness trajectory and increases the level of care as demonstrated in Figure 8.3.
Effective self-care controls disease progression and avoids crossing thresholds. Acute admission/readmission occurs.

Disease severity

Ambulatory care threshold
Primary care threshold
Self-care threshold

Effective self-care controls disease progression and avoids crossing thresholds

Standard care
Coordinated care

Hospital care
Ambulatory care
Primary care
Self-care

Progression of disease over time

Figure 8.3: Level of Patient Care in Relationship to Disease Severity (Source: NSW Health Government Action Plan 2001).

It has been disappointing in the study that the rhetoric of total patient care often expounded by nurses has not been manifest in practice (Williams & Botti, 2002). Of concern is the primacy of the theme struggling to cope. Struggling to cope concurs with other studies documenting a profession struggling to cope with the increasing acuity and complexity of health care delivery (Williams & Botti, 2002).

Chronic conditions are expected to become the main cause of morbidity and mortality globally by 2020, contributing around two thirds of the global burden of disease with enormous healthcare costs for societies (Lopez & Murray, 1996; Henriksson & Jönsson, 1998). In spite of this prediction, it is becoming increasingly evident that healthcare providers are ill equipped to manage chronic conditions effectively, not only at an individual level, but also at the level of government and policy (Epping-Jordan & Sabaté, 2001).
Nursing Practice

This study has many messages for nursing at all levels. Considering the fact that nurses are struggling to cope and they are missing the big picture, the nursing profession as a whole, and indeed government, needs to consider ways of implementing models of care that embrace a real concept of patient-centred care. The model has to incorporate the continuum of care. Diabetes care is not alone in the need for change in the way we conduct business within health. Overarching frameworks to inform models of care development include evidence-based practice, quality improvement, collaborative, change management, project management, disease management, theoretical perspectives and consumer participation models of care (Davidson et al. 2004). Figure 8.3 suggests that if we partner with patients early in the disease trajectory of healthcare by planning our services to interact, then people will be given every chance to maintain a desirable quality of life.

Finally, the research has given nursing a message regarding how nurses see themselves within the healthcare arena. The nurses in the study intimated that their role continues to be subservient to medicine. This was evident from indications from some that it is not their role to refer patients to other healthcare providers such as diabetes educators. Likewise, some nurses indicated that the provision of health promotion and health education can be dictated by medical officers, and indeed medical officers are the providers of some of this information e.g. education on medication regimes. The message is that we need to empower nurses to take responsibility in this vital aspect of nursing care. They must know it is their responsibility, as well as the whole healthcare team, show their efforts are having a positive impact in the continuum of care.
The role of empowering our nurses is a whole community responsibility. The current nursing education review (Heath, 2002) identified some of these issues. Reflection of the behaviour theories reviewed in Chapter Three may teach the profession some lessons. The health locus of control as described could help address the nursing problem. The theory postulated that people who have internal locus of control would take self-control (Gillibrand & Flynn, 2001). Conversely, those with external locus of control will rely on others in control to tell them what to do and how to behave. Internal locus of control can be promoted by education as demonstrated by Bergman and Berterō (2001). While Bergman and Bertero’s study focused on people with diabetes, their results can be applied to all population groups, including nurses who, if empowered through education, may take control of their situation and not rely on others to guide them when considering issues such as health promotion and health education for hospitalised people with diabetes.

**Further Research**

The study is one of the first to consider not only nurses’ attitudes, but also their subsequent behaviours when caring for hospitalised people with diabetes. Further research into nursing care is needed from three perspectives.

The first is replication in another population setting in an effort to confirm whether these findings are indicative of the nursing climate in Australia. As defined in Chapter One, Western Sydney has a unique population that creates its own specific challenges for nurses. Thus, there is a need to determine whether these unique qualities alone explain why the nurses in this study are *struggling to cope* and thus *missing the big picture.*
The second is in relation to evaluating models of care that align with the concept of continuum of care as described by Davidson et al. (2004). Nursing has to accept that many existing models of care are either historical or reactionary. The findings of the study document that acute, procedural care continues to have priority over chronic care. Within the context of an epidemic of chronic disease, these attitudes are inherently problematic. In order to address the dilemma we need to work together from government to bedside to community care to self-management.

The final recommendation from the research is to investigate the problem from the patient’s perspective. To gain understanding of how patients believe health promotion is approached within the acute healthcare setting would be invaluable to planning and implementation of models of care that meet the needs of the population across the continuum of care. Those who work in healthcare must always consider the consumer who receives the care. To not include their perspective in the policy and models of care change processes will set it all up to fail (Hornsten, Norberg & Lundman, 2002). Patients, their families and significant others must be satisfied with the care provided and the means of care delivery for any success to be achieved.

**Conclusions**

The aim of the study was to explore and describe the extent to which clinical nurses, working in Western Sydney hospitals, feel able to fulfil their role of providing health promotion and health education to patients with diabetes. Specifically, the aim was explored from three perspectives. These were how nurses assess patients when providing health promotion and health education related to diabetes management, to determine what nurses believe their role is and what actually happens in relation to referring patients to specialist diabetes educators, and determine the extent to which nurses feel able to fulfil these roles.
The study has provided a valuable insight regarding these aims. Most of the nurses involved in the study had difficulty providing health promotion and health education to patients who have diabetes. The difficulty occurs because of many factors that include workload, patient-related issues such as a perceived lack of interest, and the nurses feel under-prepared to perform this care. Additionally, they do not have an appreciation of providing health promotion and health education assessment and care while attending to their everyday ward activities. They do not consider the time they spend while showering patients and other everyday duties can be opportunities to assess the patient’s understanding and self-care behaviours. However, one of the over-arching themes was the nurses’ missing the big picture. The nurses had difficulty considering living with diabetes, with their focus on what is happening today. Self-management strategies were either not thought about or were too hard to contemplate. An appreciation of behaviour change strategies and theories was lacking within the nurses. Moreover, the nurses do not have a culture of self-education as was apparent from the few nurses who have had any formal or informal education since their undergraduate education.

Referral to diabetes educators was less than optimal and was not occurring as would be expected, considering the enormity of potential long-term complications of diabetes. While nurses say they generally know the process for referring, they refer only under limited circumstances and in fact often leave it to other professional groups.

Nurses are certainly struggling to cope. They often feel unable to perform health promotion and health education activities with acute care activities consuming their time and energies. Moreover they do not feel supported by their peers, their management, and administrators. The number and acuity of patients they have to
nurse at any one given time is overwhelming. Consequently they can think of nothing but getting through the day, rather than how they could have a major impact upon the numbers and acuities of the people they nurse if they had brief discussions with their patients about self-management, and subsequent referral to diabetes educators.

On the weight of the strengths and limitations of the study it is concluded that the study results have provided important insight into the attitudes and behaviours of nurses in relation to health promotion and education in diabetes. These findings have important implications for nursing practice, research and scholarship. While it is now five years since the data collection phase of the study was completed, the process of writing the thesis has shown that the issues identified are just as relevant in 2004 as they were in 1998 and 1999. Nursing shortages, quick turn-over of patients, more and more knowledge about disease, and dwindling health resources, has ensured nursing continues to be a challenge for us all (Davidson et al. 2004).

The researcher initiated the study through recognition of a clinical problem involving health promotion and health education of people with diabetes. Diabetes, a destructive disease if not managed well, was chosen as the specific disease process because many people with diabetes are managed in cardiac rehabilitation. The researcher has come into contact with many people who have diabetes and who have not surveilled it as is desirable to detect early deterioration. Consequently, these people are suffering the magnitude of its long-term complications. This devastation prompted the researcher to seek more insight into the disease. The evidence encouraged the researcher to investigate how health professionals can be encouraged to work together across all settings to help people with diabetes to seek optimal care and self-manage the disease. Nurses, as a professional group who spend long hours with hospitalised people, are a prime group who could have enormous impact if they engaged in brief
and opportunistic health promotion and health education strategies, and subsequently referred people with diabetes for specialised education.

The study has provided evidence of many difficulties nurses face in provision of health promotion and health education for hospitalised people who have diabetes. While some of these difficulties relate to a less than desirable sense of professionalism within these nurses, many are related to a system that is also struggling to cope and keep pace with scientific advancement and community expectations. Society has to be engaged to work with the healthcare system to put in place models that address the healthcare needs of a growing population with significant chronic diseases. The future health of Australians is dependent on this change to how we all approach healthcare.

The shift towards a real continuum of care, one that considers and addresses needs of people outside of the walls of a hospital and then follows through with outcome evaluation, will support nurses to provide health promotion, health education and subsequent referral to appropriate services. A culture where a continuum of care is usual care will empower nurses to act and accept this care as a vital component of everyday nursing. The utility and conceptual congruence of Fishbein and Ajzen’s Theory of Reasoned Action (1980) in developing the study protocol and interpreting study findings demonstrates that it could inform development of interventions and models of care. The theory recognises the complexity and interrelationship between individual’s attitudes and beliefs, their intentions, consequential behaviours and responses. Also, as the practice of nursing often comprises collective, organisational behaviours, many occur because of these social values.
Nursing's current social values is demonstrated in the powerful effect of the socialisation of new graduate nurses due to the hierarchical and often marginalising effect of traditional power and social relationships (Girvin, 1996; Hinds & Harley, 2001).

In conclusion, the study has achieved the aim of elucidating a deep understanding of nurses' perceived role and attitudes and beliefs when nursing hospitalised people who have diabetes. It contributes to the nursing profession's understanding of the multiple issues confronting nurses who work in an environment that has surpassed the traditional models of care delivery (Wimpenny, 2002). While some changes have occurred and a variety of models of care have been trialled, the health system in which nurses' work has many challenges ahead (Heath, 2002). These challenges need to be worked at so that all health professionals can facilitate self-management to optimise the quality of life for patients and their families and decrease the burden of chronic disease.
## APPENDICES LIST

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UNIVERSITY OF WESTERN SYDNEY, NEPEAN
CONSENT TO PARTICIPATE IN RESEARCH INTERVIEW

TITLE OF PROJECT: Nurses’ perceptions of their health education and promotion roles when caring for people with diabetes.

INVESTIGATOR: Robyn Speerin.
Post Graduate Research Student of the University of Western Sydney Nepean, School of Health & Nursing.

I, ........................................................................................................
of......................................................................................
...........................................................................................................................................
have read the information about being a participant in the research project titled above, and any questions I have asked have been answered to my satisfaction.
I agree to be interviewed for this research project.
I understand the interview will be audiotaped and researcher notes recorded.
My identity will not be revealed to anyone other than the researcher conducting the project.
I may withdraw my consent at any time or choose not to talk about any particular topic.
I agree that the research data gathered in the interview may be published, but my name will not be used and I will not be identified in any way.
I acknowledge that I have received a copy of the participant information sheet and this formal consent, which I have signed below.

Signature of Participant: ........................................... Date: ......................

Signature of Investigator: ......................................... Date: .......................


