University of Southern Queensland

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Healing Properties: Connection to Land and Cancer Survivorship

A Dissertation submitted by

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ABSTRACT

This doctoral research explored how 17 cancer survivors from rural Queensland describe their sense of connection to the land and how they report their survivorship journey in the context of their sense of connection to the land. The aim of this study was to gain a better understanding of this connection, as well as how it influenced their survivorship journey through and beyond cancer. The concept of being ‘connected to the land’ is largely undefined within the literature, but implies a deep sense of belonging, beyond physical location and economical investment. Indigenous peoples around the world have long expressed a deep sense of interconnectedness between their connection to land and their health and well-being, but this relationship is to a lesser extent explored as a possible factor influencing the health and well-being of non-Indigenous peoples. Expanding existing knowledge on how rural men and women perceive their connection to the land, particularly in relation to health adversity, has the potential to assist health professionals working with rural patients to better understand and address their needs.

In this qualitative study, nine men and eight women with a farming background from rural Queensland took part in in-depth interviews. All participants had been diagnosed with some form of cancer and were at least 12 months post their acute treatment phase, with a number of participants living beyond their cancer diagnosis for many years. A key aspect of their self-selection was that they all reported a strong sense of connection to the land. For this doctoral work, constructivism was chosen as the methodological framework, as it provided a platform to fully engage with the participants as partners in the research. Interview data were recorded, transcribed and analysed thematically.

The findings of this study revealed that participants clearly demonstrated a deep bond with the land that manifested itself physically, emotionally and spiritually. This sense of connection created some challenges as well as many positive outcomes. The land not only provided an income, but was a source of strength and healing during

times of adversity, particularly on their journey of recovery from cancer. My thesis is that *farming men and women of rural Queensland who feel a deep connection to the land report that this connection influences their health and well-being. A deep connection to the land provides solace and strength during times of health adversity and should be considered, and facilitated where relevant and possible, as an important aspect in the recovery journey for cancer survivors.*

CERTIFICATION OF DISSERTATION

I certify that the ideas, work, results, analyses, interpretations and conclusions reported in this dissertation are entirely my own work, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award, except where otherwise acknowledged.

Signature of Candidate

Date

ENDORSEMENT

Signature of Supervisor/s

Date

ACKNOWLEDGMENTS

A journey of this magnitude is not undertaken without the company of many travellers along the way. Some may only accompany you for a very short stretch; others stay with you half way, whereas a few stay with you throughout the entire adventure. Whatever the distance, everyone mattered.

It is without a doubt that the unfailing support and faith in my abilities of my supervisor, Professor Cath Rogers-Clark has helped me to keep the flame burning. Her knowledge, guidance and kindness have helped me to get through the challenging times and I would like to thank her for that. My associate supervisor, Dr Majella Albion has also been there to provide valuable feedback and support, which has been greatly appreciated.

This study of course would not have happened without the generosity of all the participants. They invited me into their homes and their lives and gave me a glimpse of their world. I feel privileged to have had this time with them and grateful for their contribution to my work. I must especially mention one of the participants who passed away some months after we met. We had such a special few hours together, where time stood still and we could relish in the peacefulness of his farm and our mutual connection to the land.

Along the many stages of this journey there have been family members, friends and colleagues who have inspired and encouraged me in different ways. Although too numerous to mention, the staff of the Centre for Rural and Remote Area Health at USQ, especially Annette Nanka, as well as my colleagues at the Toowoomba Base Hospital, have been wonderful friends and supporters. A special mention has to be made to Alison McDonald from the USQ Graphics Department for her visionary work.

I would also like to thank the Queensland Nursing Council who has supported this PhD dissertation though its scholarship programme for the last five years. This has been an immense help.

Finally and most importantly I must thank my husband Michael, who hasn't had a 'full time' wife for many years and patiently endured the resulting challenges. I am sure that in spite him sharing my sense of pride and achievement, he will be glad for the return of a more social life.

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CHAPTER 1: INTRODUCTION

> *The best remedy for those who are afraid, lonely or unhappy is to go outside, somewhere where they can be quiet, alone with the heavens, nature and God. Because only then does one feel that all is as it should be and that God wishes to see people happy, amidst the simple beauty of nature. As long as this exists, and it certainly always will, I know that then there will always be comfort for every sorrow, whatever the circumstances may be. And I firmly believe that nature brings solace in all troubles.*
>
> Anne Frank (1929-1945), German Jewish Refugee, Diarist

For many men and women living in rural Australia, daily life is intrinsically linked to the land, particularly for farming families and others who earn a living from it. A farm or rural property is not only a place of work, but also a place to raise the family, spend one's leisure time and in general experience a lifestyle dominated by outdoor activities. The longstanding links and health benefits of human interaction with the natural environment are well recognised (Kaplan 1995; Pretty 2002; Wilson 1984) particularly in relation to mental health. Feeling a deep connection with the land is also often highlighted as a key feature of Indigenous spiritual life, with health and well-being seen as integrally related to this connection (Rose 1996; Wilson 2003). This sense of connection to the land may also apply to non-Indigenous peoples, but is an area which has been explored to a lesser extent. From a health perspective this is a concept worthy of analysis, especially in relation to how connection to land may affect the person's experience of health-related adversity.

In Australia approximately one in three people will be diagnosed with some form of cancer before the age of 75 and in 2006 an estimated 106,000 new cases of cancer were diagnosed (Australian Institute of Health and Welfare & Australasian

Asscociation of Cancer Registries 2008). Although the incidences of cancer continue to rise, innovative treatment methods, early screening and detection and improved cancer care provision has seen an increase in the number of people living through and beyond their cancer experience (Aziz 2007; Youlden, Baade & Coory 2005). There is a large body of literature identifying many aspects of cancer care during the active treatment phase but there is little knowledge on how people cope long-term during the recovery process and beyond (Vivar 2006). As long term survivorship is becoming a reality for many more people diagnosed with cancer, health care professionals need to be educated about how to support people along the entire spectrum of their cancer journey and not only during the acute treatment phase (Collie et al. 2005; Hampton 2005).

In this qualitative study, which is situated within a constructivist paradigm, nine men and eight women from rural Queensland took part in in-depth interviews. All the participants had been diagnosed with cancer and were at least 12 months post their acute treatment phase. A key aspect of their self-selection was that all participants reported a strong sense of connection to the land. The concept of being ‘connected to the land’ has not been widely explored within the literature, but implies a deep sense of belonging, beyond physical location and economical investment. I wanted to explore this concept at greater depth with the participants, and then discuss with them how this sense of connection relates to their cancer survivorship.

The lives of rural people are often depicted in the media and literature with a persistent thread of hardship, challenges and even despair (Alston & Kent 2004; Alston & Kent 2008; Miller & Burns 2008; Morrissey & Reser 2007; Sartore et al. 2008). I began this study with some insight into the challenges rural people face, often wondering how people who have experienced persistent drought, bushfire or other adversity can continue to live in an environment that causes such levels of distress. Add to this another life crisis and ongoing burden such as a cancer diagnosis and it would appear the situation could rapidly become untenable. In fact, when conducting the literature review for this dissertation, I felt quite overwhelmed by the enormity of the problems confronting rural people. This was especially true in relation to the health disparities and access to services for those living in rural, remote communities compared to their metropolitan counterparts. However, over the course of this inquiry, I have learnt that, despite what many would consider extremely challenging circumstances, the participants in this study are resilient survivors who have survived multiple adversities and in some cases multiple cancer diagnoses. I discovered people who loved their life on the land and were not prepared to exchange it for the assured support systems of an urban setting. I was also unprepared for the intensity of their connection to the land, a feeling that was deeply seated in the hearts and minds of the participants.

Conversely, one important finding of this study, and one I had not considered prior to commencement, was the perception of some participants that their cancer was linked to the use of farm chemicals, and thus was a consequence of their lifelong work on the land. There was a feeling among these participants that on the one hand living and working on the land had been integral and vital to their health and well-being, but yet had been detrimental at the same time. This recognition caused participants to realise that their health and well-being was intrinsically linked to the health of the land, which led to major changes in the way the participants were caring for their land.

Many health professionals, especially those based in metropolitan settings, would not have a clear understanding of how rural people manage their lives with cancer, once active treatment is completed. Where there is an understanding of the continued support needs of rural cancer survivors, this tends to be focused on the provision of ongoing health services, rather than a broader focus on cancer survivorship as a ‘whole of life’ issue. Community and family support has been clearly identified as important to cancer survivorship (Bloom 2008; Bowman, Rose & Deimling 2005; Gorman et al. 2007; McGrath et al. 1999a), but what has not been explored until now is what role, if any, connection to land plays in the cancer survivorship journey .

The findings of this inquiry show that being connected to the land is an important part of the health and well-being of the rural men and women in this study and this remained or even intensified during their journey with cancer. Connection to the land was viewed as a healing force by participants as they dealt with their cancer diagnosis and ongoing life issues as cancer survivors. My thesis is that *farming men and women of rural Queensland who feel a deep connection to the land report that this connection influences their health and well-being. A deep connection to the land provides solace and strength during times of health adversity and should be considered, and facilitated where relevant and possible, as an important aspect in the recovery journey for cancer survivors.*

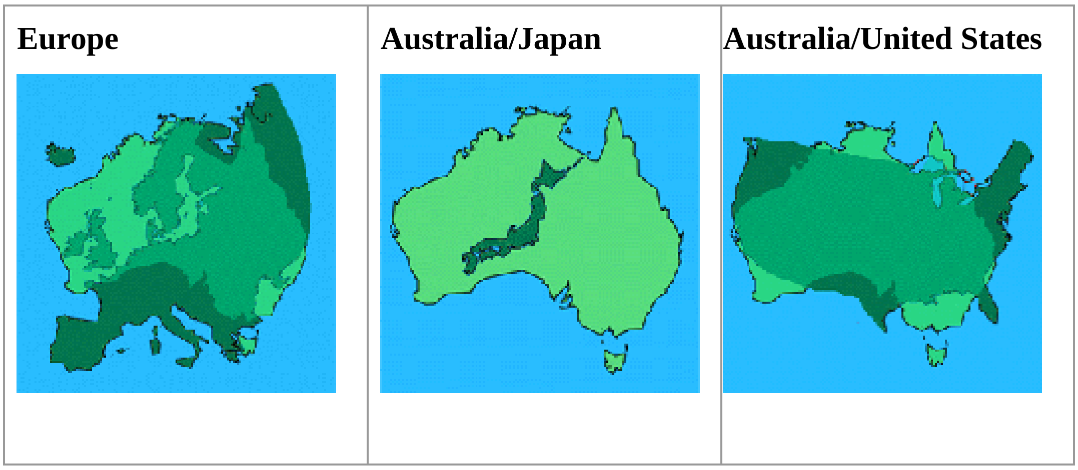
The next section of this introductory chapter will present the background of this study, including rurality in Australia and Queensland as well as information on cancer and cancer survivorship. Even though 16 out of the 17 participants were Queensland residents, rurality will be mainly discussed in the greater Australian context due to the many parallel issues rural people face across all states or in fact worldwide. The aim of this study and the research questions will also be defined. Additionally, as this study is situated within the constructivist paradigm, providing my background as a nurse and researcher is important and will demonstrate my engagement in the research process.

1.1 Research Background

1.1.1 Australia's and Queensland's rural geography

Understanding rurality in the Australian context requires an understanding of the vastness of this country. Australia is the largest island in the world, stretching 3700 kilometres from north to south and 4000 kilometres from east to west, covering a total area of 7.69 million square kilometres (Department of Foreign Affairs and Trade 2008d). To gain a better picture of what this means in comparisons to other countries, the following maps provide a size comparison of Australia in relation to Europe, Japan and the United States.

Figure 1: Comparison of Australia to Europe, Japan and United States



Geoscience Australia (online: http://www.ga.gov.au/education/geoscience-basics/dimensions/aus-size-compared.jsp)

As a means of gaining a sense of what this size comparison may mean in relation to farming in Australia, the following extract provides a good example of what an outback property may look like. The narrative is from Tim Saxon, a traveller from the United Kingdom, who spent some time working as a Jackaroo on an Australian Cattle Station.

> ‘I worked as a Jackaroo on an Australian cattle station for 3 months during the first half of my year in Australia. This particular station was both a cattle and sheep station, located between Tambo and Charleville in Outback Queensland. Known as Bayrick Station it covers approximately 60,000 acres and has hundreds of cattle and tens of thousands of sheep. Putting the size of this station in perspective it is roughly the size of Luxembourg. Compared to other cattle stations in Australia it is relatively small as one of the largest stations located in the Northern Territory is approximately 12 times larger than Bayrick.’(Saxon 2008)

Despite its size, only about six percent of Australia’s landmass is considered arable due to an average annual rainfall of 465 millimetres, which earns Australia the title of being the driest inhabited continent on earth (Department of Foreign Affairs and Trade 2008d; Department of Foreign Affairs and Trade 2008e). As a result of these challenging climatic conditions, drought appears to be not an episodic natural event, but part of the Australian landscape. Since recording in the years 1895 to 2000, Australia has had 24 years of devastating drought, 22 years of major drought and 23 years of severe drought (McKernan 2005, p. 5). In spite of such harsh and adverse conditions, within the diversity of the landscape exists an abundant biodiversity of more than one million species many of which are unique and cannot be found anywhere else in the world (Australian Bureau of Statistics 2007a; Department of Foreign Affairs and Trade, 2008a).

From a historical perspective, Australia is considered to be one of the oldest landmasses and it is estimated that it has been populated by Aboriginal and Torres Strait Islander peoples for around 60,000 years (Department of Foreign Affairs and Trade, 2008a). The first European settlers from Great Britain arrived in 1788 and since this time the Australian landscape has undergone substantial changes due to urbanisation, agriculture, mining, pastoralism and infrastructure development (Australian Bureau of Statistics 2007a). Many of the early settlers began their new lives as farmers, wanting to re-create what they were accustomed to in their native lands. The new wool and wheat industries became very successful, dominating Australian agriculture by the 1900s (Australian Government 2008), with the saying that Australia was built ‘off the sheep’s back’ reflecting the large economical contribution sheep farming has made to this country.

Queensland is the study setting for all but one of the participants in this study (who lived just across the New South Wales and Queensland border). It is the most north-easterly state of Australia with an area of 1,727,200 sq km and has a coastline of 7,400 km (Australian Government n.d.). Queensland covers 22.48% of the total area of Australia and is the second largest state (Australian Government n.d.). In 2008, the estimated population of Queensland was 4,349,529, which accounts for 20.1% of the total Australian population (Office of Economic and Statistical Research 2009). A Queensland population growth of 2.5% in 2008 is above the Australian overall growth of 1.9% (Office of Economic and Statistical Research 2009). In relation to population location, in Queensland 60% of the population lives in major cities, 21.8% in inner regional areas, 15% in outer regional areas, 2% in remote and 1.2% in very remote areas (Australian Bureau of Statistics 2008).

1.1.2 Australian and Queensland agriculture

Up to 60% of Australia's landmass is made up of farms, making a major contribution to Australia's' economy (Australian Government 2008). Today's agricultural sector contributes $39 billion gross value per year and employs around 370,000 people across Australia (Australian Government 2008). Sheep and cattle still play a major role, with crop growing including grain, sugar cane and fruit contributing over 50% to the Australian agricultural market (Australian Government 2008). Most of the agricultural production occurs within regional and remote areas and farming in these environments presents many challenges due to low rainfall, soils that have low fertility and what appears to be a never ending sequence of adverse natural events such as droughts, floods and bushfires. What appears even more astonishing is that despite the myriad of challenges for primary producers, 'Australia produces enough wool for 500 million people, enough grain to feed 200 million, cotton for 100 million, sugar for 85 million and meat for 30 million. Its primary production would provide a balanced Western diet for 80 million people – more than four times what Australia's present population needs' (Archer & Beale 2004, p. 10). It would seem that Australian farmers have developed very efficient methods in dealing with some of the environmental challenges.

The Queensland climate varies greatly across the state with very hot and dry regions in the south-east, west and south-west of the state, and a tropical climate with monsoonal rains in the north (Australian Government n.d.). The total area of agricultural holdings in Queensland covers an area of 145,519 hectares, with around 26,159 farms, which represents 20.8% of all Australian farms (National Farmers' Federation 2009). The fertile Queensland soil provides a perfect environment for a large variety of agricultural industries, with main production including sugar cane, grain, fruit and vegetables, cotton, dairy and livestock (Australian Government n.d.).

1.1.3 Defining rurality

The current Australian population is estimated at around 21,900,000 and according to the Australian Bureau of Statistics about two thirds of the population lives in major cities, with the rest of the population being located in inner and outer regional areas (31.1%) and only 2.6% of the population living in remote areas (Australian Bureau of Statistics 2004). Humphreys (1998b, p.215) stated that ‘there is no single rural Australia’ as rural and remote Australia ‘comprises of a complex mosaic differentiated on the basis of geographical, environmental and socio-demographic characteristics’. Hence, defining what ‘rural’ and ‘remote’ actually mean is a difficult task. This view is shared by Williams and Cutchin (2002) who remarked on the tremendous diversity between different rural places and suggest that the term ‘rural’ should be viewed holistically in order to understand the complexity of these environments. In fact Judd et al argued that rural residence should not only be described by physical location but in terms of: ‘1. the patterns of social connections that link an individual residing in a rural location to other individuals and to group and community settings; and 2. the socioeconomic and cultural constraints and opportunities associated with that rural location’ (2002, p. 299).

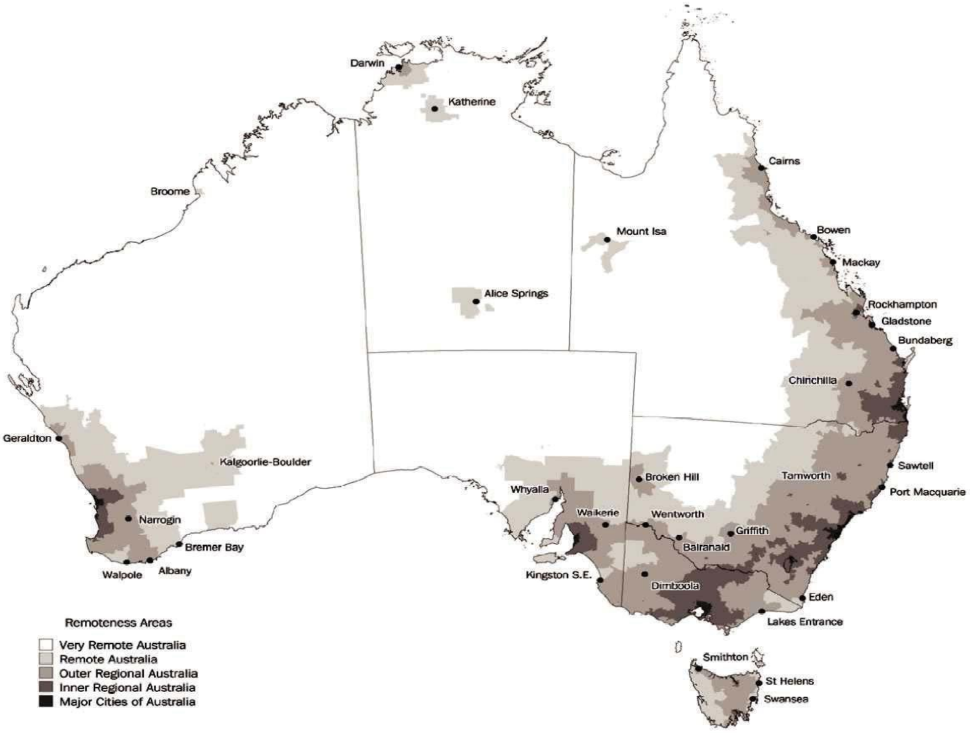
1.1.4 Classification systems

In Australia, the concept of classifying what constitutes urban, rural and remote is dependent on a number of different geographical classification systems. These serve a number of purposes such as resource allocation of services and measuring of health service utilisation and health outcomes, hence the importance that the classification most appropriately captures the population within it (Humphreys 1998b). There are three widely used classification systems which include the Rural, Remote and Metropolitan Areas (RRMA) classification, the Access/Remoteness index of Australia (ARIA) and the Australian Standard Geographical Classification (ASGC).

The National Rural Health Alliance, in their submission for a new geographic classification for a new health system, expressed that it should be well devised, powerful, flexible and ‘capable of being maintained and appropriately adjusted to reflect changes on the ground over a long working life’ (2008, p.4). In light of the specificity of the different classifications and the debate surrounding which classification system best meets the needs of the various populations it is not within the scope of this study to examine this in great detail. For the purpose of this study, a brief overview of the different classifications will be provided. The RRMA classification was used to categorise the locations of the participants in this study and more details are provided in Chapter 4: Design and Methods.

The concept of classifying what constitutes a metropolitan, regional or remote area is dependent on the aim and measurement used in the different geographical classification methods. The RRMA classification was developed in 1994 and measures remoteness on population estimates (Australian Institute of Health and Welfare 2004). The ARIA classification on the other hand, was developed in 1997 and ‘represents remoteness from goods and services for any part of Australia’ based on road distance and population size of service centres (Australian Institute of Health and Welfare 2004, p. 6). The Australian Bureau of Statistics (2003, p. 4) uses the Australian Standard Geographical Classification (ASGC) which ‘divides geographical Australia into different regions and hierarchies of regions for different analytical purposes’. The ASGC Remoteness is designed to simply group ‘areas into classes where all members of a class have similar, but not identical, characteristic of remoteness’ (Australian Bureau of Statistics 2003). The following map shows the application of the ASGC classification in the various parts of Australia:

Figure 2: ASGC Remoteness of Australia



(Australian Institute of Health and Welfare 2004, p. 12)

To gain a sense of the population levels within major cities, inner regional, outer regional, remote and very remote areas, the following table provides information of the statistical distribution of the Australian population across the different states:

Table 1: Distribution of the population across remoteness areas - 30 June 2001.

	Major Cities	**Inner Regional**	**Outer Regional**	**Remote**	**Very Remote**	**Total(a)**	
State/territory	%	%	%	%	%	%	'000
New South Wales	71.4	20.5	7.3	0.6	0.1	100.0	6,575.2
Victoria	73.4	21.2	5.3	0.1	-	100.0	4,804.7
Queensland	52.4	25.9	17.8	2.5	1.5	100.0	3,628.9
South Australia	71.8	12.4	11.8	3.0	1.0	100.0	1,511.7
Western Australia	70.6	12.2	9.8	4.8	2.6	100.0	1,901.2
Tasmania	-	63.6	34.1	1.8	0.6	100.0	471.8
Northern Territory	-	-	54.0	21.2	24.8	100.0	197.8
Australian Capital Territory	99.8	0.2	-	-	-	100.0	319.3
Australia(b)	**66.3**	**20.7**	**10.4**	**1.7**	**0.9**	**100.0**	**19,413.2**

(a) Includes persons in Migratory category.
(b) Includes persons in Other Territories
(Australian Bureau of Statistics 2004, online)

1.1.5 Socioeconomic factors & health and illness

As indicated in the previous table the majority of the Australian population live in major cities or inner regional areas and rural and remote populations are comparably small, but population numbers alone do not tell the whole story of rurality. When defining these distinct groups it is also useful to consider other selected characteristics of rural and remote populations. Much of the disadvantage in relation to health can be understood in the context of socioeconomic and environmental factors (Australian Institute of Health and Welfare 2008a). Lower levels of education, employment in high risk occupations, restricted physical and financial access to services, and low socioeconomic status have long been identified as some of the major social determinants of health (Australian Institute of Health and Welfare 2008b; Phillips 2009).

As well as the factors mentioned above, some other major factors leading to poor health in rural and remote communities include lack of access to services, health professionals and health information, the long distances to access specialist services, exposure to a harsh environments, higher levels of tobacco and alcohol use, lack of access to fresh food, lifestyle issues and specific characteristics such as stoicism and work culture (Alston & Kent 2008; Australian Institute of Health and Welfare 2008a; Beard et al. 2009; Eley et al. 2008; Gregory 2009; Hossain et al. 2008; Phillips 2009; Veitch 2009). Statistically the health status of rural residents shows that the life expectancy in regional areas is 1-2 years lower and remote areas up to 7 years lower than for Australians in metropolitan areas (Australian Institute of Health and Welfare 2008a, p. 83). Rural and remote populations have higher rates of chronic diseases, as well as psychological distress, compared to people from major cities (Australian Institute of Health and Welfare 2008a). An area of particular interest for this study is cancer, in particular in the rural context with figures showing significant differences between major cities, inner and outer regional and remote areas (Australian Institute of Health and Welfare 2008a; Cancer Australia & Australasian Association of Cancer Registries, 2008).

1.1.6 Cancer and cancer survivorship

The word ‘cancer’ continues to evoke fear and worry in many Australians, despite public education efforts by cancer groups to focus on enhancements in treatment and better survival rates. In Australia, the incidence of many of the common cancers such as breast, prostate, bowel, melanoma and lung cancer continue to rise (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). In 2005, a total of 56,158 males and 44,356 females were newly diagnosed with cancer with predictions of an increase of 3000 extra cases per year between

2006 and 2010 (Australian Institute of Health and Welfare & Australasian Association of Cancer Registries 2008). In the Queensland context, melanoma rates in Queensland are the highest of all the states, but all other cancers have a similar incidence rate as the rest of the country (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008).

Despite the rising cancer trends, early screening programmes have contributed to detecting cancer in its early stages thus improving the chances of prolonged long term prognosis or even cure (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). The 5-year relative survival for all cancers has increased significantly for diagnoses made during 1998–2004, with survival for males increasing to 58% in 1998–2004 and for females to 64% (Australian Institute of Health and Welfare & Cancer Australia & Australasian Association of Cancer Registries 2008).

Defining the term ‘cancer survivorship’ is complex. Personal meanings may well be quite different from the medico-scientific definition of living beyond the five year milestone. The Lance Armstrong Foundation, an American organisation dedicated to the support of cancer survivors, defines cancer survivorship in terms of living ‘with’, ‘through’ and ‘beyond’ cancer’(Lance Armstrong Foundation 2004). This means that ‘living with’ cancer refers to the experience of receiving a cancer diagnosis and any treatment that may follow, living ‘through’ cancer refers to the extended stage following treatment, and living ‘beyond’ cancer refers to post-treatment and long term survivorship (Lance Armstrong Foundation 2004, p.4). However, it is also noted that survivorship experiences are progressive and unique for the individual and their family (Lance Armstrong Foundation 2004).

As mentioned previously, the evidence of how people, and in particular rural people, cope with their cancer experience in the long term remains sparse. For rural people with cancer, the majority of support may well be provided by family, friends and the wider community (Hegney, et al. 2005; Maly et al. 2005; McGrath et al. 1999a), and individual faith and spirituality is also identified as providing strength and support to people with cancer (Ferrell et al. 2003; Meraviglia 2006; Ross et al. 2008). In the context of positive effects on health and well-being, there is also evidence to suggest that engagement with nature either directly, such as gardening, (Field 2006; Milligan, Gatrell & Bingley 2004), pet ownership (Daniels 2008; Halm 2008), or taking part in a wilderness experience (Fredrickson & Anderson 1999), or indirectly, such as viewing a natural setting through a window (Ulrich 1984) has been found to be beneficial. An extensive search revealed no literature that considered if engagement with nature, and in particularly connection to land, had a role in the survivorship journey of people with cancer.

1.2 Aim of the Study

The aim of this study was to gain a better understanding of how rural men and women with a cancer diagnosis perceived their connection to the land, with a specific focus on how this connection influenced their survivorship journey through and beyond cancer.

1.3 The Research Questions

The research questions explored in this study are:

1. How do rural Australian men and women describe their sense of connection to the land?
2. How do rural men and women with cancer report their survivorship journey in the context of their sense of connection to the land?

1.4 The Researcher

Passion and commitment are generally what motivates most researchers to devote their time so intensively and intimately to one topic, and my work on this inquiry is no exception. As a registered nurse, I am passionate about quality of care, and very determined to seek out ways to help the people in our care, but another important passion throughout my life has been the love for nature. Until this inquiry, I was never quite sure how I could combine these two passions, but in retrospect all my work to date has been preparing me for this focus.

My journey as a nurse did not start in the traditional sense, in that I was 35 when I decided to go to University to study nursing, after years of working in the retail sector and then in disability services. Despite loving my undergraduate years in nursing, and my clinical work as a graduate nurse in a variety of clinical settings including aged care, orthopaedics, surgical, medical and day hospital, deep down I knew I wanted more from nursing. I was fortunate that some of my lecturers identified my affinity for research early on in my career, and I became increasingly involved in health research at the University of Southern Queensland, working for six years on a variety of rural health projects. During this time I also completed my Master of Nursing and commenced my Doctor of Philosophy.

However, at times I felt I was not a ‘real nurse’. I chose to return to practice as a Community Health Nurse and later as a Geriatric Service Liaison Nurse in Telemedicine at Toowoomba Health Services, a position which I loved and gained a great deal of pleasure from. My work with elderly patients and their families was challenging and rewarding, but also inspirational as I listened to and observed them. Many of these people came from rural settings, and their life stories often reflected lives of hardship and resilience. My choice of PhD topic seemed ‘right’, although finding the time to complete the work at the same time as managing a full time clinical appointment was difficult.

Eventually, I was fortunate enough to be appointed to the position of Nurse Researcher at the Toowoomba Hospital, which renewed and accelerated my motivation and desire to complete this dissertation. Knowing that I can use my skills and education to benefit patients not just in this hospital but possibly globally is a very satisfying feeling and nurtures my desire to be ‘a real nurse’.

Returning to the question of combining my two passions - caring for people’s health and well-being and my strong connection to nature - it took some time until I could make the links. Throughout my years of talking to patients in the hospital and participants in the various research projects, one thing that always struck me was their love for the land. Without fail, when talking to elderly farmers in the hospital, our conversation would stray to talking about horses, dogs, sheep and cattle. Many would remark how much they love their life on the land and how hard it was for them to be cooped up in the hospital or deal with the challenges of having to travel to and stay in a major city for specialist treatment. A general comment would be “I could not wait to get out of there (city)” or “I hate having to stay in the city”. These comments were not only about missing their home and familiar surroundings, but also the longing to be back in the wide open spaces and the peace and quiet of the country side.

Another contributing factor in deciding to focus on rural people with cancer was that, as part of my Masters degree, I completed a dissertation on the experience of people with cancer from Toowoomba who travelled to Brisbane for radiotherapy. Even though the participants in this study were in their acute stage of treatment and their concerns were predominately around the practical issues related to their separation from their home and families, I was impressed with their hardiness and ability to cope with the multiple stressors. This study was the impetus for my interest in cancer and the psychosocial issues for patients and their families. Furthermore, a number of cancer diagnoses in my family and circle of friends heightened my awareness of the far reaching impact of this disease. When researching the health literature on the effects of cancer, it soon became apparent that research surrounding the acute phase is very strongly represented, however we know very little once people move into long-term survival. Consequently my experience in talking to rural patients, personal experiences and information I gleaned from the health literature, provided me with a starting point for my research.

As mentioned, there is plentiful information in the literature about cancer care in the acute treatment phase; but closer examination also reveals that generally the focus is on problem identification instead of identifying strengths, which motivated me to look at survivorship from a strength based perspective. But I was also mindful not to minimise the trauma and challenges the cancer diagnosis would have caused the participants and to include this in my work. Surprisingly, my concerns were unfounded and despite the fact that I asked each participant to tell me about their cancer experience so I could understand their personal situation, many of them did not dwell on talking about their cancer. Mostly they gave me a brief overview or focused on an area that was particularly important to them. The majority of the conversation soon moved to talking about the participant’s connection to the land and issues surrounding this connection. In many ways, their cancer experience became secondary.

In the early stages of designing my research plan, I was contemplating using a quantitative approach. I had previously been involved in qualitative research and felt I wanted to hone my quantitative skills. After some initial attempts of looking at ways to quantify my chosen topic, I soon realised that due to the largely unexplored and individual nature of the topic, a quantitative study design would not be the best method of exploration and possibly limit the participants’ expression within the constraints of a quantitative data collection tool. It was important for me as a nurse and researcher to carefully listen to what participants had to say, engage with them and also get a sense of their physical environment. I wanted to see and feel their landscape in order to get a clearer picture of what they were describing, such as their favourite place in their garden or the dam they would go to for some relaxation. This could not have been achieved by sending out a questionnaire and in hindsight I am satisfied that choosing a qualitative approach has delivered some interesting and thought provoking findings.

In writing this chapter nearing the end of my dissertation, it has provided me the opportunity for reflection on the research process. Although the years have gone quickly, I look back at a journey that has elevated my knowledge and research skills to a much more professional level. However, deciding to enrol into a Doctor of Philosophy degree is a bit like going on a journey by sea. I liked the idea, but didn’t quite know what was ahead. Just like gazing at idyllic pictures of a magnificent boat on calm, clear waters, I was inspired by visions of what a wonderful and exciting journey this would be, and was prepared to invest much time and energy to achieve a lifetime goal. Like the first exhilarating days on the ocean, I was excited about this new and different life and this sustained me for a while. However, along the journey, there were days and months of ‘rough seas' and situations I did not anticipate, but at this stage turning back was no longer an option. The rough times were inevitably followed by periods of glorious, smooth sailing, which were energising and at times filled with delight and pride at overcoming obstacles and achieving so much. Looking back on the journey, I am proud that I got there, feeling a sense of freedom and elation, but also, strangely, a sense of real loss that the journey has ended.

1.5 Overview of the Dissertation

This dissertation is structured to provide the reader with a logical, detailed and coherent account of the research processes involved in the development of this work. Even though the end result of many years of study and research has produced this document, the reality is that each part evolved in its own due time, whenever it was logical, appropriate, possible or mandatory. Following is an outline of the chapters as presented in this dissertation:

- This chapter 1 has introduced this research study by providing the background for the research, discussing the aims of the study and the research question, a background to the researcher and an overview of this dissertation.
- Chapter 2, the Literature Review, presents the key concept of this study in relation to the literature and includes rurality, connection to land, cancer and cancer survivorship and therapeutic environments.
- Chapter 3, Methodology, discusses the philosophical, theoretical methodological underpinnings of this study within a constructivist paradigm.
- Chapter 4, Design and Methods, presents the research methods used in the research process including participant recruitment and selection, data collection, data analysis, quality of the research and ethical issues.
- Chapter 5 presents the findings of the thematic analysis with the main themes including ‘The land is part of me, it never leaves you’, ‘My personal kingdom, my sanctuary’, ‘Take care of the land and it takes care of you’, ‘I’ve almost got no friends left’, ‘You’ve got to live with nature – she is a pretty hard task master’ and ‘That’s what country life is about’.
- Chapter 6 discusses the findings of this research in relation to the literature and presents the new findings that transpired from this work.
- Chapter 7 is the final chapter in which conclusions are drawn with particular focus on recommendations for future research and consideration for nursing practice.

1.6 Conclusion

In this introductory chapter I have provided the background to this study, outlined the overall aim and the research questions, and given an overview of my background as a researcher as well as a summary of the overall structure of this dissertation.

The following chapter presents an extensive review of the literature covering the issues relating to this study. This review will provide an in-depth discussion of the current state of knowledge in relation to rurality, connection to land, cancer and cancer survivorship, as well as healing environments. Consideration of each of these key concepts will assist in gaining insight into each concept individually, but more importantly will help in conceptualising the subject of this study within its complex and interconnected reality.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The following chapter presents an extensive review of the literature in relation to connection to land and cancer survivorship. Over the course of this study, regular searches of all relevant databases such as CINAHL (Ebsco), MEDLINE (Ovid), EMBASE, PubMed, PsycInfo, EmeraldScience Online and Web of Knowledge, as well as digital theses, grey literature and Google Scholar, were conducted to keep abreast with any new and emerging research relevant to my work. Universities' and Queensland Health Libraries were accessed regularly and additional resources were drawn from reference lists within articles, books and dissertations as well as follow up from suggested readings by my supervisor and colleagues. Due to the somewhat 'off centre' choice of topic within the discipline of nursing and hence limited literary evidence, research literature from a diverse range of disciplines such as psychology, sociology, ecology, architecture and philosophy was consulted. The result has been an eclectic collection of works across many disciplines, foci, opinions and methodologies, adding to the depth and breadth of knowledge in which this research is based.

This literature review will examine the issues of rurality by considering what it means to live in a rural environment from a positive and negative perspective. Cancer and particularly cancer survivorship from a rural perspective will be the other major focus.

2.2 Living on the Land

Living on the land denotes not only a physical location, but encompasses a unique and challenging lifestyle which is highly dependent on a number of variables. It is evident within the literature that the interconnectedness between environment in its broadest sense and all aspects of rural people's lives is complex, making it almost impossible to discuss any issue in isolation. Much has been written about the social, economical, cultural, health and illness issues within rural communities; however the predominant features identified within the literature are the problems and challenges rural people face. While this may be reflective of the harsh realities of rural living, there are no doubt good reasons why people continue to stay on the land. Very little research has been done to understand the connection rural people have to the land and the potential benefits it may have in their daily lives, in particular to their health and illness experience (Phillips 2009). The natural environment is an integral part of rural living and, in order to see the bigger picture, has to be taken into account when discussing rural issues.

2.2.1 Connection to land

Since early settlement by Europeans in the late eighteen hundreds, agriculture played a major role in the lives of the settlers. Many had come from farming backgrounds and wanted to continue in their new homelands. Despite the different environment European settlers would have experienced compared to today's rural dwellers, one thing that has not changed, is that the lives of rural people are intrinsically linked with their natural environment. Many rural people live and work on the land and this relationship can lead to a strong bond with the natural world and a greater connectedness to the power and unpredictability of nature (Worley 2005).

When considering today's agriculture, it is important to acknowledge its 12,000 year history and the influence of some 600 generations of human farming, with some of the earliest surviving European texts indicating that *agri* (Latin for fields) and *cultura* (Latin for culture) and the production of food was an integral part of these early communities (Pretty 2002, p. xii). Jules Pretty (2000) in his book on Agri-Culture, Reconnecting People, Land and Nature provided an interesting insight into the enduring connection of people with the land. He stated:

> 'An intimate connection to nature is both a basic right and a basic need. When it is taken away, we deny it was ever important, or simply substitute occasional visits and personal experiences'. …'For all of our time, we have shaped nature, and it has

> shaped us, and we are an emergent property of this relationship. We cannot suddenly act as if we are separate'. …'The connection is philosophical, spiritual and physical' (Pretty 2002, p. 10&11).

Just as Pretty had done, Geschiere and Gugler (1998) proposed that the intimate connection between health and land is a symbol shared by all people and it is an essential human need to draw nourishment from the earth. This view is also shared by Stoll (1989), who found that spirituality is experienced through a caring connectedness to nature and the world and that this may apply to human beings universally. Brown et al. (2005) discussed how humans have a long history of spiritual connection to the land and considered the possibility of a number of different constructs existing within different communities. For example, what can be perceived by one person as a wide open space filled with freedom and calmness maybe a lonely and isolating place for another. Brown et al. (2005) believed that the relationship people have with the land cannot be explained by reason alone. Fitzgerald, Pearson and McCutcheon (2001) explored this concept further and asserted that rural Australians have a deep affinity with the land, but it is 'not only purely economical in the sense that they earn a living from it but a spiritual sense of being part of the land from which they draw strength' (p. 239). Accordingly, in terms of evolution and history of modern society, these human relationships with their environment and its deeply spiritual connection have been an important aspect of human health and well-being (Brown et al. 2005).

The links between connection to land and its constructs in relation to overall health and well-being for Indigenous peoples worldwide has been well documented (Goodall 1996; Johnston et al. 2007; Mehl-Madrona, 2005; Pretty 2002; Reid 1982; Wilson 2003). Connection to land for Australian Indigenous peoples means a deep spiritual connection and 'because of this richness, country is home, peace, nourishment for body, mind and spirit and heart's ease' (Rose 1996, p.7). In a world that is changing rapidly, even for traditional Indigenous peoples, being in one's own country means feeling comfortable, calm and peaceful, and being able to escape the stresses of daily life (Kingsley et al. 2009).

While acknowledging the profound importance of the human - natural environment connection in Indigenous populations, it is reasonable to question why very little research had been conducted to explore this concept more closely with non-Indigenous Australians. A review of the literature discussing connection to land for rural people has yielded some useful insights, however the evidence is relatively scant. One Australian study (Pretty, Chipuer & Bramston, 2002) found that those participants who liked living in a rural environment were particularly orientated to the natural environment and found fishing, walking, hunting and riding an important part of their connection. It was noted that this finding was particularly prevalent in the male participant population (Pretty, Chipuer & Bramston 2002). Rural men were the focus of a phenomenological study conducted in New South Wales. The men discussed their lived experience of leaving the land to retire and spoke of how significant and meaningful the land had been in their lives (Wythes & Lyons 2006). Similarly Holmes identified that pastoralists, who took part in his study, reported a strong affinity with their livestock and the landscape (Holmes & Day 1995), whilst participants in a study by Barclay showed that farm and country values and the way of country life were of great importance to them (2008).

Connection to the land has also been described in studies focusing on rural women. A qualitative study into the meaning of health and well-being for five rural older women found that their connection and intimate relationship with living on the land positively influenced their health and well-being (de la Rue & Coulson 2003). This intimate connection with the land also created reminiscences and memories which were helpful during their ageing experience and provided comfort during their transition to widowhood and other stresses in their lives (de la Rue & Coulson 2003). Ruth Beilin (1998) explored the connection of seven rural women’s life stories in relation to their landscape, using an ethnographic narrative approach. For the women in this study, living on the family farm was closely interwoven with their landscapes, thus providing ‘opportunities to preserve, restore and create new landscapes in the future’ (Beilin 1998, p. 178) and acknowledging the inseparable nature of this personal landscape from the ‘growth, development and fate of the women and their families’ (p. 179).

2.2.2 Rural resilience

When discussing the connection of rural people to their land, one thread that runs alongside is how the land shapes the lives of the people who live in it. It is generally acknowledged that life on the land is tough, physically and emotionally and requires a great deal of strength and resilience. Current health literature points out how self-reliance, stoicism and pride can be a barrier for rural people to seek out services and assistance (Alston & Kent 2008; Fuller et al. 2000; Judd et al. 2006; Morrissey & Reser 2007), however such traits may well be what is needed to survive on the land. Much of Australia’s myth and folklore romanticises about the bush and the connection within. Early European settlers found the bush to be something very different from what they had experienced in their native lands. Living in the bush meant having access to nourishment but also a struggle for survival through self reliance, resilience and determination (Australian Government 2007). Wainer and Chesters (2000) identified that a strong connection to land and the seasons is one important factor in enhancing resilience in rural people. Living in a rural setting in modern Australia continues to be challenging and communities often rely on their strength within through mutual support and readiness to help a ‘mate’.

In a study by Hegney et al (2007) on resilience in rural communities, one important finding was that participants felt a sense of being valued by their community, and supportive networks were vital in assisting people in the community through difficult times. The community in which this study was conducted had experienced a multitude of environmental challenges such as drought, hail, frosts and bushfires for many years, but in spite of such adversity, continued to see itself as strong and thriving. Another study of rural men who had experienced mental health issues due to some adverse events in their lives also identified that the support of family, friends and community made a significant contribution to enhancing their resilience (Gorman et al. 2007). In fact, often the physical isolation created strong bonds between individuals and their family and social networks.

2.2.3 Spirit of the bush

It would appear that for rural people who have experienced substantial adversity, community support and what is commonly known as the ‘spirit of the bush’ is extremely important, not only from a social perspective, but also for communal survival. People, who know that they can count on support when times get tough, know that people will also be there when times are good. Pretty, Chipuer and Bramston (2002) in a study on sense of place identified the importance of sense of community and belonging, suggesting that a collective social identity is as important as individual identity to rural people. However, there is some evidence that high levels of prolonged adversity may also lead to some erosion of what is generally considered country values. Caldwell and Boyd (2009) in a recent small qualitative study on coping and resilience in farming families affected by drought, identified that the drought had negative impacts on communities as rural people may become more competitive and inwardly focused on individual needs rather than those of the whole community causing a weakening of collective coping strategies.

In spite of some indication that changes in the way rural communities support each other may be on the horizon, there is still ample evidence suggesting that rural people are happy with their setting and the support within. Two Australian studies found that older men and women living in small rural or remote communities reported a greater feeling of safety and belonging than their urban counterparts (Quine & Morrell 2008; Young, Russell & Powers 2004). Similarly, Queenslanders living in remote part of the country reported higher satisfaction with life, particularly with safety, feeling part of the community and were more willing to help each other, compared with urban and rural areas (Queensland Health et al. 2004). This is further supported by the study findings of 32 Victorian farming men and women which explored the stressful events which could be associated with depression, anxiety or substance abuse (Centre for Rural Mental Health 2005). The study concluded that most participants expressed high satisfaction with farming life, coupled with a positive outlook on life. It would appear that a strong sense of community connection in rural and remote communities often draws everyone closer together during times of adversity, thus multiplying their strength and their ability to cope. Ironically, this strong community connection can also cause a feeling of entrapment as some people feel they cannot leave and are tied down to their setting due to elderly family members having their roots in the community (Pretty, Chipuer & Bramston 2002).

2.2.4 Family connections

Modern Australian agricultural has undergone substantial changes in recent years particularly in relation to how farms are operated and the role of the family within. In 2006, the agricultural industry employed a total of 330,900 persons, with the majority being males (224,100) and 106,800 female workers (Australian Bureau of Statistics 2007b). The family structure of farming families is also changing from the traditional models. According to the Australian Bureau of Statistics (2006), only 40% of farming couples are both working on the farm and spouses with tertiary education are more likely to work outside the farm. Between 1986 and 2001 there has been a decrease of 22% of farming families in Australia, mainly due to personal, economic or environmental reasons (Australian Bureau of Statistics 2006). Australian farmers are also ageing, with many farmers working well beyond their retirement age (Australian Bureau of Statistics 2006).

Just like the early settlers who had their connection to their homelands, a large number of today's farmers have a generational connection to their farms. A study by Barclay (2007) into succession planning of farmers found that 'despite some evidence of a shift towards large corporate farms in Australia, most family farms are tending to remain within traditional legal structures of property ownership, such as family partnerships (62%) or sole operators (17%) and they employ only family labour' (p. 2). Barclay (2007, p. 2) also identified that two thirds of the participants in her study were farming on land that had been family owned for several generations, with the average being at least three generations. Generally they expressed traditional views on succession and inheritance, with 45% believing that passing the farm on to a family heir was the best way to continue the farming tradition and viability of the farm (Barclay 2007). There may be changes on the horizon as younger farmers are looking at newer forms of business structures and farms of the future may well take on different models (Barclay 2007). It is yet to be seen if any shift in thinking and practices in the upcoming farming generations will bring with it a change to their connection to the land.

2.2.5 Land management

Pretty (2002) had some thoughts on how changes in farming may effect connection to land. He warned that modern trends in technology and industrialisation creates a dualism that separates humans from nature and instead of ‘viewing oneself as part of a greater system, the trend is to see ourselves as detached objective observers’ (Pretty 2002, p. 12). As a result, people become disconnected from their environment which could lead to environmental degradation and abuse (Pretty 2002). Pretty’s notion is indirectly supported by Schultz et al. who found that people who closely associated with the natural environment were more likely to be concerned about environmental issues (2004). Admittedly for many farmers in the past and today, it has been a fine balancing act of staying financially viable and producing good crop outcomes versus harm to the environment. It appears that, to some degree at least, the message has been increasingly taken onboard and trends to reverse and prevent the environmental mistakes of the past are underway, at least within the Australian context.

Over recent years more emphasis has been placed within the agricultural industries to adopt environmentally sustainable practices. Interest in modern and sustainable farming continues to rise and farmers are trying to work in harmony with their environment (Moffat 2008). A survey by 67 South Australian pastoralists revealed that they ‘closely identify with their way of life and distinctive (and challenging) behaviour’ and see themselves ‘not only as producers, but as custodians of the rangelands, capable of making decisions towards sustainable management’ (Holmes

& Day 1995, p. 193). According to Barclay ‘all too often farmers are blamed for environmental degradation, and the positive contribution they make to environmental sustainability is overlooked’ (2008, p. 1). A recent large scale, ongoing survey of 1926 farmers across Australia on managing the farm environment identified that almost all participants had introduced at least one type of best practice land strategy and believed that that they carry the main responsibility for managing their environmental resources (Barclay 2008). Over half also reported having preserved some areas on their farms for environmental benefits, such as fencing off remnant vegetation, riparian areas or wetlands to encourage birds and other wildlife (Barclay 2008). However, the participants also identified that government restrictions, lack of funding, lack of water and resulting unsuccessful establishment of trees, insufficient labour and age, were some of the barriers to implementing more wide-ranging conservation practices (Barclay 2008).

To sum up, the evidence suggests that connection to land for people living in rural and remote locations is an integral component of their lives. This connection is multifaceted, and encompasses the physical environment but most importantly their and the community’s place within it. Years of farming since the early settlers has created connections and survival enhancing attributes in what was once a foreign land. However, there is some evidence that farming and rural living continues to change with the times, changes which may ultimately affect people’s connection to land.

As discussed previously, rural living has many challenges requiring a level of resilience and self-reliance on the part of the inhabitants. The following section considers some of these challenges and what it means for rural and remote people.

2.3 Rural Challenges

According to Veitch (2009) people living in rural and remote parts of Australia are more directly exposed to the natural environment than their urban counterparts. This exposes them to everyday challenges such as high levels of exposure to sun and extreme weather conditions, exposure to venomous and injurious animals such as snakes or feral animals and the sheer distance to other people and services (Veitch 2009). As a consequence of this intimate connection, living with natural disasters is a harsh reality for rural communities at any given time. Evidence show that these can have long term psychosocial, mental health and community impacts (Morrissey & Reser 2007; Sartore et al. 2008). Many parts of rural Australia have been in drought for several years and water is a precious commodity. Tim Saxon, a traveller from the United Kingdom, gave an interesting account on how living with water shortages affected everyday life whilst living on the cattle station.

> ‘Water is rationed; this is because of the extremely arid environment in the Outback. On Bayrick station the water for washing pots and having showers came from the local creek. Creek water was orangey brown in colour and if you got any in your mouth it tasted like sand. All drinking water was either bottled water bought from the nearest town or rain water collected in massive steel drums at the end of each building. This water did tend to play havoc with your digestion for the first week or so, after which you adapted to it and found yourself strangely liking this two year old rain water by the end of your time on the station. Water for the animals was pumped from bore holes using windmills and then transferred directly to either water troughs or large manmade dams scattered across the station.’(Saxon 2008)

2.3.1 Environmental adversity

Drought has been an enduring challenge for farming families and the ripple effect is widely felt. For many urban dwellers it is difficult to imagine the level of hardship some rural families deal with on a daily basis. According to Bi and Parton (2008), in rural and remote Australian communities, climate change will affect natural resources, farming activities, population health and social and economic development. Just as demonstrated in the previous account by Saxon, living without water, the source of all life, is challenging. Watching stock die, the land slowly turning to dust and feeling helpless at the mercy of nature is no doubt extremely distressing. A qualitative study by Sartore et al. (2008), exploring the experience of drought for two farming families in New South Wales, found that on top of already existing financial and workload pressures, the drought caused significant emotional distress particularly in relation to environmental degradation, concerns for the future of the community and a feeling of not being supported by the wider Australian community. Special note was also made of the distress of the women in the study about losing their gardens and children's reluctance to play outdoors (Sartore et al. 2008).

Hall and Scheltens (2005) in their paper presenting complex cases of women callers they had dealt with in their rural counselling capacity, argued that despite media and public focus, the plight of rural Australians remains unheard. The five women in the Hall and Scheltens study told stories of family and community erosion due to ageing communities; ongoing financial hardship; isolation and helplessness; role confusion as employment outside the farm is often sought by farming women; family tension and breakdown and exacerbation of family problems leading to violence (2005). Similarly, a comparative study of the role of rural women in Australia, New Zealand and Canada determined that not much has changed in the last ten years within the patriarchal structure of Australian farming families. Despite changes in women's education and opportunities, rural women continue to be expected to devote themselves to family and community whilst rural men continue to stubbornly cling to 'patriarchal attitudes' (Teather 1998, p. 219). To add to these social, cultural, environmental and economic pressures, it is well recognised that human services to assist distressed families are overloaded but also hampered by attitudes of stoicism, masculine hardness and reluctance to accept assistance, often adding to the emotional burden on women. (Alston & Kent 2004; Fuller et al. 2000; Judd et al. 2006; Wainer & Chesters 2000).

The difficulties rural communities face appear to be nestled within a complex web of circumstances and are unlikely to be easily resolved. Hall and Scheltens maintained that despite drought often being portrayed as an induced crisis, it appears that it is 'a complex situation of entrenched and chronic problems that, in many cases, pre-dated the drought or were peripheral to it' (2005, p. 355). Furthermore, 'the qualities associated with rural families and communities are not always accurate, some are mixed blessings and some have been impacted and disrupted by demographic, economic and social factors over time (Hall & Scheltens 2005, p. 355).

2.3.2 Rural decline

Some of the entrenched and chronic changes to rural communities as outlined by Hall and Scheltens are also evident in the disappearance of services to the bush. In Pincott’s view, over the last decade rural and remote Australian communities have seen an unprecedented withdrawal of essential services such as banking, health, education and communication (2004). This has a major impact on rural communities as people are leaving small towns and they are no longer viable, thus creating many of the ghost towns which can be found *en route* into the Australian Outback. The declining rural populations conversely cause additional pressures on the remaining community as they are overstretched trying to continue with community commitments (Sartore et al. 2008). Another result of the decimation of rural services is that young people continue to leave their homes for education and training opportunities, and often do not return due to poor job prospects (Beard et al. 2009; Fragar et al. 2008).

In summary, rural life is complex and not easily described in simplistic terms such as tough or idyllic, but is in reality a mixture of good and bad, with differences among individual experiences as well as in geography. The harsh climate of the Australian Outback, coupled with ongoing economical and social challenges, continues to threaten rural communities. These stresses will ultimately impact on the health and well-being of rural communities and the following section looks at the effects of rurality on health and illness.

2.4 Rurality and Health and Illness

The idyll of the rural lifestyle with forests, gardens and supportive communities are often perceived as an ‘open-air sanatorium’ and ‘organic heavens of community and connectedness' (Wainer & Chesters 2000, p. 143). The urban comparison on the other hand speaks of 'illness causing environments, dark alleys and social isolation' (Wainer & Chesters 2000, p. 142). However, Wainer postulated that this rural idyll no longer reflects the reality of today's rural environment and Humphreys stressed that the notion of fresh country air and health food producing healthier people has been dispelled by rural and remote morbidity and mortality data (1998a). The following section takes a closer look at some of the major health issues faced by rural and remote communities.

2.4.1 Factors affecting rural health

A lot can be gleaned from the literature in relation to the ongoing health challenges faced by people on the land. Rural people experience health differentials in relation to physical and mental health in a setting of frequently limited access to health services (Allan, Ball & Alston 2007; Alston et al. 2006; Australian Institute of Health and Welfare 2008b; Welch 2000). According to Phillips (2009), poorer health outcomes are often related to higher risk factor profiles coupled with low income, lower levels of education, physical and financial access to services, occupational and environmental risks and health needs unique to the Aboriginal and Torres Strait Islander population. Furthermore, rural living means services are withdrawn due to low socioeconomic return, high rates of youth unemployment, population loss, psychological poverty due to loss of power and breakdown in social conditions, loss of sense of community and government policies that do not support rural communities, thus enhancing rural poverty (Alston 1999). Beard et al. (2009) provide a comprehensive list of some of the socioeconomic and cultural factors influencing the health and well-being of rural people, showing the complexity of context in which the health of rural people needs to be considered.

Table 2: Rural socioeconomic and cultural factors influencing health.

Individual (including family)-level factors

- Poverty
- Sex
- Indigenous status
- Climate-dependent occupation
- Stoic behaviours
- Family alcohol and smoking norms
- Other family lifestyle patterns
- Health literacy

Neighbourhood population characteristics

- Neighbourhood socioeconomic disadvantage
- Population ageing
- Movement to cities of young families
- High proportion of community being of Indigenous background

Neighbourhood social characteristics

- Close-knit communities
- Movement to cities of young/middle aged
- Indigenous communities
- Availability of support services, such as financial counsellors

Neighbourhood-level physical characteristics

- Climate change
- Geographic isolation
- Access to health services
- Access to other services (e.g. banking, financial counsellor)
- Access to higher-level education
- Access to information (Internet, television)

(Beard et al. 2009, p. 14)

Considering the substantial influences on the health of rural people, despite the well recognised need, research in rural people's health and well-being is still lacking the depth of that of their urban counterparts. Paul Worley, editor-in-chief of the Rural and Remote Health Journal speculated that reasons for the paucity of research may be related to the ‘humility brought about by the greater connectedness rural and remote people have to the power and unpredictability of nature’ or perhaps ‘a function of isolation, of poverty of access to the tools of the academic trade and the self-sustaining networks of influence within the academic community’ (Worley 2005, p. 1).

2.4.2 Rural health differentials

For many years the health of rural and remote Australians has been of concern for the Australian Government (National Rural Health Policy Forum & National Rural Health Alliance 1999). Current data suggest that people living in rural and remote areas of Australia are more likely to experience a higher level of injury, disease and poor overall health and lower life expectancy compared to their city counterparts. (Australian Institute of Health and Welfare 2008b; National Rural Health Policy Forum & National Rural Health Alliance 1999; Phillips 2009). Health differentials are also identified in the areas of mental illness, youth suicide and substance abuse (Humphreys 1998a). These levels of poorer health are reflected in higher mortality and hospitalisation rates, with death rates increasing with remoteness (Australian Institute of Health and Welfare 2005a), and increased health risks through obesity, smoking and high alcohol intake, thus leading to chronic diseases and other related illnesses (National Rural Health Policy Forum & National Rural Health Alliance 1999; Kreger & Hunter 2005). The leading causes of death are circulatory disease (42%), injury (24%), and respiratory disease and cancer constituting about 10% (Australian Institute of Health and Welfare 2005a).

Some of the factors contributing to this poor state of health have been identified as lack of access to services and fresh foods; the tyranny of distance to access specialised services; environment; education and confidentiality issues as well as socio-economic concerns (Australian Institute of Health and Welfare 2008a; Fitzgerald, Pearson & McCutcheon 2001; Hegney et al. 2005; Silveira & Winstead-Fry 1997). Notably the ongoing difficulties of recruiting and retaining health professionals wanting to work in rural and remote communities (Eley et al. 2008;

Humphreys et al. 2002) and the stressful work conditions, such as violence, lack of support and excessive workloads (Lenthall et al. 2009), add further pressure to the provision of ongoing health and wellness support to these communities.

Without a doubt, health and well-being is influenced by an array of factors, and it is not surprising that an Australian study by Lee and Browne (2008) on the subjective well-being of rural people found that participants with low levels of psychological distress and physical and mental disability reported greater life satisfaction. On the other hand, a metasynthesis of the literature conducted by Harvey (2007) in relation to the ways rural Australian women achieve health and well-being, identified that some tension exists between sense of belonging and social isolation, as well as a culture of stoicism and resistance of rural women to societal expectations in relation to coping with adversity. A 2005 report by the Australian Institute of Health and Welfare in relation to rural, regional and remote indicators of health also provides a picture of self reported health indicators. It shows that life expectancy is higher in major cities (78 for males and 84 for females) and lowest in remote areas, however these figures are strongly affected by the poor health status of the Indigenous populations in the remote parts of Australia (Australian Institute of Health and Welfare 2005a).

Overall self assessed health status of people from regional areas when compared to major cities showed that women were as likely to report good health, however men in the 25-44 age bracket were less likely to report good health (Australian Institute of Health and Welfare 2005a). This finding is supported by Brown, Young and Byles in their longitudinal study of Australian women’s health, which discovered that 45-50 year old women were coping amazingly well with lack of health service access and other rural stressors and there was no evidence to suggest that their health status is lower than that of their urban counterparts (1999). In relation to chronic disease in regional and rural communities, self reports for overall chronic disease did not find any significant differences between regional areas and major cities; however these statistics are at odds with higher rates of diabetes related and ischaemic heart disease mortality (Australian Institute of Health and Welfare 2005a). One attributable factor could be the reluctance of rural people to seek out specialist treatment until economically or socially convenient (McCarthy & Hegney 1999), so once they seek out help, they are often at a late stage if their illness, with less favourable treatment outcomes (Stamatiou & Skolarikos 2009).

2.4.3 Rural mental health

Mental health problems in rural communities have consistently been identified as a major issue even though reportedly they are on par with those from major cities, with similar reports of psychological and emotional distress, affective and anxiety disorders and substance abuse (Australian Institute of Health and Welfare 2005a; Bramston et al. 2000). A study by McLaren and Hopes involving 655 urban and rural Victorians discovered that despite increased suicide rates in rural areas, the participants in this study reported significantly more to live for than their urban counterparts (2002). It is well recognised that mental health service provision is poorly coordinated and fragmented with limited resources and crisis care (Kreger & Hunter 2005). Stigma and privacy issues are major concerns for mental health sufferers in rural and remote communities (Gorman et al. 2007) thus affecting opportunities for diagnosis, treatment and support. Additionally, the culture of self reliance, stoicism, pride and ‘stiff upper lip’, particularly in rural men, makes it difficult for mental health professionals to make inroads in rural communities (Alston & Kent 2008; Beard et al. 2009; Centre for Rural Mental Health 2005). Fuller further suggested that a sense of lack of purpose and connectivity to our spiritual self, the community and the physical environment may add to existing predisposing factors, thus increasing the risk of depression in rural people (2005).

Due to the well recognised long term stressors related to agricultural work, more research is emerging on mental health issues affecting farmers and their families. As discussed previously, years of drought and other adverse environmental conditions as well as economic downturns have significantly added to the stress of farmers and their families (Centre for Rural and Remote Mental Health (CRRMH) 2005; Centre for Rural Mental Health 2005; Hossain et al. 2008; Sartore et al. 2005). A retrospective audit of South Australian (SA) data from 1997-2001 on suicide statistics found that suicide rates on farms were significantly higher than overall suicide rates in SA (Miller & Burns 2008). Fragar et al. (2008) stated that despite the uniqueness of farming which ‘can promote great satisfaction with quality of life’; environmental, climatic, economic and social stressors may impact on farming people’s sense of well-being and mental health (p. 1). According to Phillips (2009), the future disease patterns for rural and remote dwellers may be impacted by a change in environmental conditions such as climate change which has been felt for some years, with droughts, floods, extreme temperatures and bushfires. In fact there is recent evidence suggesting that land degradation, either through human intervention or natural environmental influences causes distress to people living in these areas (Albrecht 2005; Connor et al. 2004; Speldewinde et al. 2009). Yet evidence remains sparse and Phillips argued that very little is known thus far in this area and more research is needed (2009). On a positive note, many farmers continue to live and work on the land by maintaining a positive outlook, addressing practical problems and relying on the support of family and friends (Centre for Rural Mental Health 2005).

Mental health problems, such as depression can also be linked to long term chronic illness (Van Manen et al. 2002) or inability to continue to fulfil one’s role as a provider of family support, which could be said for people suffering from injury and disability. Rural people were found to be 1.2 times more likely to suffer from long-term conditions due to injury and were more likely to have a disability compared to their city counterparts (Australian Institute of Health and Welfare 2005a). Overall motor vehicle accidents contributed to 9 % of the rural death rate and for people less than 65 years, injury, in particular, motor vehicle accidents and suicide, contributed to increased mortality rates (Australian Institute of Health and Welfare 2005a). Working in rural environments is often physical and high risk, coupled with unpredictable work environments and limited resources, thus placing rural and remote workers at higher risk (Australian Institute of Health and Welfare 1998; Fragar et al. 2008). Fragar et al. emphasised that depression and anxiety can impact on a farmer’s ability to work safely as ‘loss of concentration, exhaustion, effects of medication or alcohol, indecision, and lack of energy are some of the symptoms which can increase the risk of injury to people working in hazardous, isolated environments without supervision and support’ (2008, p. 1). Additionally, there is evidence to suggest that males and females in regional and remote areas are more likely to engage in personal and social risky behaviour which can further add to the burden of injury in disease in these communities compared with major city dwellers (Australian Institute of Health and Welfare 2005a).

In summary, rural Australians continue to be disadvantaged due to their choice of residence and current research indicates that existing rural health services are not meeting the demands and needs of rural people. Although some progress has been made in the last ten years to improve the rural health workforce, more energy needs to be channelled into health education and prevention (Humphreys et al. 2002). The multitude of evidence in the literature on the challenges, difficulties and problems rural people face in regards to their health and illness is extensive, to a point where is it almost impossible to see how they can be resolved. The main focus is on identifying deficits rather than identifying strengths, and more research is needed to promote a strength based approach, that is, what works instead of what does not. Bramston et al. (2000) have a similar view, remarking that the current health literature places too much emphasis on the rural-urban comparison and not enough on looking at the ‘real differences between the contexts of those environments’ (p. 158), indicating that each environment is unique and should be considered as such. As mentioned previously when defining rurality, there is no ‘single rural Australia’ (Humphreys 1998b, p. 215) and the diversity of landscape and environmental conditions across Australia is noteworthy, however remains poorly recognised in Australian health literature.

Judging by the statistics, clearly a significant number of people living in rural and remote areas of Australia must deal with a major illness at some stage of their lives. As the participant group in this PhD study are rural men and women who have survived cancer, the next section will discuss cancer in Australia overall and rural Australia, in greater depth.

2.5 Cancer in Australia and Queensland

Although over 6,600 Queenslanders died from cancer in 2002, early detection of cancer through screening programs as well as improvements in cancer treatment has seen steady increases in cancer survival rates over the last 20 years (Youlden, Baade & Coory 2005). People diagnosed with cancer often undergo a lengthy treatment phase which generally involves surgical interventions and possible adjunct therapies such as chemotherapy and radiotherapy. The first line of medical treatment is a very important step towards the fight to beat cancer, but the diagnosis of cancer will touch the lives of the sufferer and their family well beyond the initial treatment phase. The following section discusses cancer in Australia and Queensland with particular emphasis on the challenges of cancer in the bush.

2.5.1 Cancer statistics

Cancer can be defined as a diverse range of diseases where abnormal cells in the body, grow rapidly and often spread throughout the body in an uncontrolled manner (Queensland Health 2008a). Cancer has an enormous impact on the individual and their families as well as associated costs to the health care system. In 2005, a total of 56,158 males and 44,356 females were newly diagnosed with cancer with predictions of an increase of 3000 extra cases per year between 2006 and 2010 (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). An ageing population coupled with an increase in the underlying cancer incidence rate have been identified as the major reasons for this growth (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008, p. vii). For men, the most common cancer is prostate cancer, which constitutes about 29% of all cancer diagnoses, followed by colorectal cancer and melanoma of the skin (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). For females, the most common cancer is breast cancer which made up 27% of all cancers, with colorectal cancer being the second most common, followed by melanoma of the skin, lung cancer and lymphoma (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). Overall in 2005, prostate cancer (16,349 cases), colorectal cancer (13,076 cases), breast cancer (12,264 cases), melanoma of the skin (10,684) and lung cancer (9,182) made up 61% of all cancer diagnoses in Australia. Cancer rates for males and females are about equal up to the age of thirty, with women having higher rates than men between 30 and 53, however over the age of 55 men have higher cancer incidences compared to women (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). The following table provides a breakdown of the 10 most common cancers in Australia:

Table 3: The 10 most common (a) cancers, Australia

Cancer type	**Number**	**Percent of total**	**ASR (A)**[b]	**ASR (W)**[c]	**Risk to age 75**	**Risk to age 85**
Persons						
Prostate	16,349	16.3	-	-	-	-
Colorectal	13,076	13.0	61.3	43.2	1 in 23	1 in 12
Breast	12,265	12.2	-	-	-	-
Melanoma	10,684	10.6	50.6	39.8	1 in 26	1 in 17
Lung	9,182	9.1	43.1	30.3	1 in 30	1 in 16
Lymphoma	4,430	4.4	21.0	16.3	1 in 64	1 in 39
Unknown site	3,226	3.2	15.0	9.9	1 in 114	1 in 50
Leukaemia	2,591	2.6	12.3	9.6	1 in 114	1 in 66
Kidney	2,297	2.3	10.8	8.2	1 in 117	1 in 74
Bladder	2,262	2.3	10.6	7.0	1 in 149	1 in 66
All cancers (a)	100,514	100.0	472.7	351.3	1 in 3	1 in 2

(a) Excluding non-melanocytic skin cancer.

(b) Age-standardised incidence rate using the Australian 2001 Standard Population, and expressed per 100,000 males/females/persons.

(c) Age-standardised incidence rate using the WHO 2000 World Standard Population, and expressed per 100,000 males/females/persons.

(Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008, p. 8)

In relation to other states in Australia, Queensland has comparable patterns and five year survival statistics, with bowel, melanoma, breast, prostate and lung cancer being the most commonly diagnosed cancers (Queensland Health 2006). The exception is skin cancer or melanoma, where Queensland has the highest rate in Australia with 65.3 cases in 100,000 persons (Queensland Health 2006), which is not surprising considering the climate and outdoor lifestyle. When combined, other than non-melanocytic skin cancers, Queensland has the highest aged standardised incidence rate of cancer with 494.4 cases per 100,000 people compared to the other states (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). Disease specific Queensland data show that for female Queenslanders, breast cancer was most prevalent, followed by melanoma and colorectal cancer (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). For males, prostate cancer was most prevalent, followed by melanoma and colorectal cancer (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008).

2.5.2 Cancer mortality

Cancer continues to be one of the biggest killers of Australian men and women and despite improved screening and treatment methods, death from cancer is predicted to slightly increase in the future (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). In 2005, over 39,000 people died from cancer with lung cancer, prostate cancer, breast cancer, colorectal cancer, pancreatic cancer and cancer of unknown primary site having the highest death rates (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). It is worthwhile noting that in 2005, death from lung cancer in women has overtaken death from breast cancer, a trend that has been attributed to increased rates of smoking in females (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008).

2.5.3 Cancer screening

Despite some of the grim statistics in relation to mortality and burden of disease, national screening programmes have made a major contribution to the early detection and treatment of a number of cancers. Screening programmes include those for breast, prostate, colorectal and cervical cancer with significant success as death rates for breast cancer have decreased from 31 per 100,000 women in 1991 to 22 in 100,000 women in 2006 (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). Similar success has been achieved with the introduction of cervical screening, with the death rate from cervical cancer halving from 1991 to 2006 (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). These national screening initiatives also have made a major contribution to cancer survival and it was estimated that in 2004 over 650,000 living people in Australia had been diagnosed with cancer in the previous 23 years (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). Cancer survivorship and issues surrounding it are discussed in greater detail further along in this literature review.

2.5.4 Financial burden of cancer

Besides the human costs of cancer, the impacts of this disease are also felt in the health system. From 2006 to 2007, 10% of hospital admissions were due to cancer related problems, with chemotherapy taking up the greatest proportion, followed by non-melanoma skin cancer, special screening examinations, secondary cancers and follow up surgery for cancer (Australian Institute of Health and Welfare & Australasian Asscociation of Cancer Registries 2008). For the treatment of cancer, hospital costs of up to 68% made up the largest expenditure, which contrasts the costs for other disease hospital costs of 42%, indicating that the majority of cancer treatment costs are hospital based (Australian Institute of Health and Welfare 2005b). Total expenditure was also high in the 65 and over age group as this age group also accounted for 58% of all new cancer cases including non-melanoma skin cancer. It is projected that the expenditure for cancer care will increase from $3.5 billion to $10.1 billion in the period from 2003 to 2033, with the main contributing factors being an increase in volumes of services per case of disease, population growth, and ageing of the population (Goss 2008, p. 20).

Just like the rest of the country, the burden of cancer also puts increasing pressure on the Queensland health system. Queensland's population has been growing at a rate of 2.6% annually and cancer incidences have been increasing by 3.5% (Queensland Health 2008b). According to 2004 figures it was estimated that around 367 Queenslanders were diagnosed with cancer every week with similar contributing factors such as ageing of the population and population growth like the rest of the country (Queensland Health 2008b). Overall figures of 17,938 cases of cancer in 2002 are projected to rise to 25,357 by the year 2011 (Queensland Health 2006). The median age of cancer diagnosis varies between men and women with 68 and 64 respectively (Queensland Health 2006). Interestingly, despite a steady increase of cancer diagnoses in females of 1.1% from 1982 – 2002, there has been a decrease in the rate for males of 0.7% (Queensland Health 2006). Promisingly there has also been a decrease in the rate of death for females of 7.3% and males of 10.4% with the median age of death due to cancer being 72 for men and women (Queensland Health 2006).

In conclusion, although cancer is predicted to increase in the Australian population in the future, early screening programmes and advances in cancer treatment methods have improved the chances of longer or long-term survivorship. But despite these advances, being diagnosed with cancer is challenging on many levels and this is particularly true for rural and remote residents. The following section will examine the issues of cancer for rural men and women.

2.6 Rurality and Cancer

In parallel with the previously discussed issues in relation to health and illness of rural and remote Australians, cancer statistics show some positive and negative statistics when comparing urban and rural and remote populations. A recent publication by the Australian Institute of Health and Welfare argues that current data on the health characteristics of rural and remote people are limited in availability, representativeness and quality due to incompleteness and inaccuracy (Australian

Institute of Health and Welfare 2008a). When considering current cancer statistics, the issues for very remote Australians, who are in the majority Indigenous Australians, are different from those of non-Indigenous people. For example, the skin pigmentation in remote living Indigenous Australians is protective against melanoma (Australian Institute of Health and Welfare 2008a).

2.6.1 Rural cancer statistics

Some of the key findings for cancer statistics in regional, rural and remote areas of Australia in 2006 (Australian Institute of Health and Welfare & Australasian Association of Cancer Registries 2007) include that males living in all regional areas have a 5% and females a 3% higher all-cancer incidence than those living in major cities (p.89). Melanoma incidence was higher in all regional and remote areas, other than very remote areas which had significantly lower incidence (p. 89). Lung, head and neck, and lip cancer rates increased significantly with increasing remoteness, with higher rates of smoking among both the Indigenous and non-Indigenous potentially being the possible cause for the increased rates of smoking-related cancers in these areas. (p. 89). Cervical cancer incidence was 20% higher in outer regional areas (statistically significant), 35% higher in remote areas and 26% higher in very remote areas (p. 89). Interestingly for reasons unknown, stomach cancer, liver cancer and lymphoma have significantly lower incidence rates in rural and remote areas compared with major city areas (p. 89).

Overall new cases of cancer are roughly 1.1 times higher in regional areas and 0.9 times in very remote areas compared to major cities (Phillips 2009). However, when considering the all-cancer prevalence, between 1997-2004, major cities had the highest rates and remote and very remote areas the lowest (Australian Institute of Health and Welfare & Cancer Australia & Australasian Association of Cancer Registries 2008). These figures may be indicative of lower cancer rates in certain geographical locations, or they may also be a reflection of lower screening rates and resulting lower levels of detection.

2.6.2 Agricultural chemicals and cancer

Many of the risk factors for rural and remote people are high levels of exposure to sun, lack of exercise, poor diet, and high levels of tobacco and alcohol use. One risk factor of particular interest for this study is the exposure of farmers to agricultural chemicals. Farmers, their families, and indeed the entire community, are at risk of exposure to farm chemicals either indirectly through their water, air and food supplies or through direct exposure when using farm chemicals. The use of pesticides, herbicides and insecticides has been an integral part of farming practices for many years and opinions about the effect on human health remains divided.

Pesticides can be defined as 'biologically active substances which are intended to kill or incapacitate species' (Radcliffe 2002, p. 2), and 'exert adverse effects on organisms and therefore have potential to cause toxicity to non-target species including humans' (p. 73). An extensive review of pesticide use in Australia in 2002 by the Australian Academy of Technological Sciences and Engineering found its use for crop protection continued to increase, with figures showing growth in chemical costs from $1100 million in 1996 to $1600 million in 1999, with the largest amount of over $800 million being spent on herbicides (Radcliffe 2002, p. 9). The main forms of pesticides used in Australia include herbicides, fungicides, insecticides and growth regulators, with over 6000 products on the market (Radcliffe 2002). Historically, some of the earlier pesticides such as DDT (Dichlorodiphenyltrichloroethane), which was used in World War II to control insects such as mosquitoes, are now banned in Australia due to health and environmental concerns (Radcliffe 2002). In more recent times, despite the wide use of pesticides, some positive changes have been made by Australian farmers, with greater levels of understanding on pesticide use, personal protection and adoption of Integrated Pest Management programmes and Best Farming Practices (Radcliffe 2002).

As reported previously, people living in rural and remote areas are, due to the nature of their work, at high risk of injury and death. Between 2001 and 2004, a total of 381 farmers in Australia died through non intentional injury, with the under 15 year old age group making up the highest percentage of 17.6%, followed by the 55-64 year old age group of 14.4% (Pollock, Fragar & Morton 2007). Reports on accidental poisoning leading to death by solids, liquids, gases or vapours from 1990-1998 for Australian farmers and farm workers showed a total of 20 cases of incidental poisoning (Fragar, Sankaran & Thomas 2005, p. 12). As a consequence of living in a rural environment, members of rural communities will inevitably have some level of exposure to agricultural chemicals at some stage of their life.

According to a report on occupational cancer in Australia (Australian Safety and Compensation Council 2006), it is estimated that about 23% of the Australian workforce is exposed to occupational carcinogens, which constitutes approximately 1,691,400 workers (Australian Safety and Compensation Council 2006). The report states that there are very well known links between occupational exposure and cancer, for example the exposure to asbestos and mesothelioma, but the true magnitude of the problem is not well known due to the potential lag time between exposure and the onset of cancer (Australian Safety and Compensation Council 2006). This finding is in agreement with a report on pesticides and adverse health outcomes in Australia, which states that the ‘extent of human health effects from exposure to pesticides is difficult to source due to potentially long latency periods for chronic illness, the difficulty in diagnosis, the non-specific nature of pesticide health effects and lack of effective monitoring systems' (Fragar, Sankaran & Thomas 2005, p. 4). Long latency periods and lack of workers’ compensation statistics are also some of the reasons why, unlike other areas of occupational health and safety, chemical exposure does not receive the same level of attention (Johnstone, Capra & Newman 2007).

When investigating farmers as a cohort, 1990-93 industry figures from the European Union compared to Australia showed that in the agricultural and hunting industry, approximately 37.97% of workers were potentially occupationally exposed to carcinogens (Australian Safety and Compensation Council 2006, p. 35). MacFarlane, Glass and Fritschi (2009) however, pointed out that the likelihood of pesticide exposure across all farm jobs varies greatly, with most likely exposure in crop and livestock farming, but farm type, length of service and historical period of employment should be also be considered when assessing pesticide exposure in the farming industry. This finding is particularly pertinent in cases where farmers, who are now in their 50s and older, were using agricultural chemicals in their younger years, which are now banned due to their implications on human and environmental health. Additionally, changes in work practices surrounding pesticide application have since changed substantially in Australia (Australian Safety and Compensation Council 2006), however this does not hold true for the more unregulated countries like Bolivia or Nicaragua, where acute occupational pesticide intoxication and environmental pollution continue to be a significant problem (Corriols et al. 2009; Jors et al. 2006).

The literature abounds with articles demonstrating either no, possible, or definite links to cancer in relation to pesticide exposure and this review presents only a small portion to demonstrate the diverse views. Many of the studies have been conducted in America and evidence in the Australian literature is sparse. A study by Neuberger et al. (2004), for example, investigated the concerns of a rural community in Kansas (USA) with perceived excess of pancreatic and kidney cancers in combination with chemical contamination of the drinking water. The review found that there were no statistically significant increases in these cancers in the community but one finding was that in most cases the people with these cancers had been smokers (Neuberger et al. 2004). Another two studies from the USA providing disconfirming evidence of the link between farm chemicals and cancer found that agricultural pesticide exposure was not associated with a risk of male breast cancer (Cocco et al. 1998) or stomach or oesophageal cancer (Lee 2004). Similarly, an Australian study of 606 men with a diagnosis of prostate cancer investigating occupational risk factors such as toxic metals, oils, pesticides and other hazardous substances found no evidence that any of the occupational exposures to these substances were risk factors for prostate cancer or benign prostatic hyperplasia (Fritschi et al. 2007). Another

Australian study investigating cancer incidence and mortality using historical data also failed to find a link, concluding that pest control workers had comparable mortality and cancer rates to the general population (MacFarlane et al. 2009).

In contrast to the previous studies, a report by the Australian Safety and Compensation Council found that non-Hodgkin Lymphoma, kidney cancer and pancreatic cancer have been shown with reasonable evidence to be linked to pesticide and solvent use (Australian Safety and Compensation Council 2006). A study on cancer risks among Missouri Farmers found that the greatest risk for a single site cancer was lip cancer, but farmers also had elevated risks for cancer of the nasal cavities and sinuses, prostate, non-Hodgkin’s lymphoma and multiple myeloma, particularly among older men (Brownson et al. 1989). Other studies identified that farmers who mixed and applied pesticides had higher risk of prostate cancer (Meyer et al. 2007), testicular cancer, tumours of the nervous system and endocrine glands and Hodgkin’s disease (De Roos et al. 2003; Wiklund et al. 1989), higher mortality from bladder cancer (Viel & Challier 1995), excess risk of brain tumours and especially gliomas (Provost et al. 2007), and multiple myeloma (Eriksson & Karlsson 1992). A Belgian study, measuring blood levels of DDT (Dichlorodiphenyltrichloroethane) and HCB (hexachlorobenzene) in 159 women with breast cancer and comparing these with 250 presumably healthy women, found that the mean levels of DDT and HCB were significant higher for women with breast cancer compared to the control group, adding further evidence for the possible link between pesticides and breast cancer (Charlier et al. 2003). Van Maele-Fabry and Willems (2003) conducted a meta-analysis of 22 epidemiological studies published between 1995-2001 on occupation related pesticide exposure and prostate cancer, and the analysis indicated that farmers had an increased meta-ratio for prostate cancer with pesticides identified as a possible factor. Further supporting evidence was identified in an extensive review of environmental influences in cancer aetiology conducted by Newby and Howard (2005) who stated ‘it is feasible that chemical environmental contaminants, in particular synthetic pesticides and organochlorines with endocrine-disrupting properties, could be major factors in cancer aetiology, particularly for hormone –dependent malignancies, such as breast cancer, testicular and prostate cancer' (p. 56).

2.6.3 Lay-expert binary

Considering some of the divergent evidence, Mike Lloyd presented an interesting perspective on how lay people and researchers (experts) may interpret what they observe differently in what he calls the 'lay-expert binary' (2000). To demonstrate his point, he discussed the case of occupational exposure to the pesticide Benlate, of three New Zealand women during their work for the Christchurch City Council. Two of their babies had birth defects and the third baby developed seizures when three days old (Lloyd 2000). An epidemiological investigation concluded that that there was no good evidence to link the exposure to the pesticide with the babies' problems and that chance was the most likely explanation (Alchin 1994). According to Lloyd, this case clearly shows the lay-expert binary which he described as 'the domain of everyday descriptions and personal experiences of health and illness and the medico-scientific world of quantification, causation, diagnosis, treatment, double blind trial, and so on' (2000, p. 155). Lloyd asserted that science is not the absolute answer to all debates, but has shown to be at times at odds with each other, debateable and changeable (2000) and as demonstrated in this review on cancer and pesticides, the opinions are indeed divided. The debate in Australia on rural health and well-being in relation to pesticide use and cancer, has not been fully inclusive of the potential or possible causes and in Lloyd's view, one way forward is by 'getting directly involved in the lay resistance and knowledge gathering or, at a more distant level, by continually suggesting that lay knowledge should not be rejected out of hand by epidemiology, hence enlisting the services of both lay and expert epidemiologists to gain community-level resolution of ill-health issues' (2000, p. 159).

In view of the evidence presented here, there are clearly some contradictory opinions regarding the possible link between pesticide exposure and cancer. It is not within the scope of this review to discuss the possible reasons for these divergent views, as the factors influencing the outcomes of the various studies are multiple. One important consideration in relation to health education of rural communities is, if and how information on these issues reaches people. John Radcliffe (2002) concluded that reporting systems for acute health effects of pesticides are inadequate and accurate monitoring programmes are difficult to maintain. This finding may provide one explanation why rural community concerns about their health and well-being in relation to exposure to agricultural may not be adequately addressed. Health information provision is one important area requiring attention in rural and remote communities, but this continues to be challenging in an environment where health services are not adequately meeting the needs of the community (Lee et al. 2009). The following section investigates the current state of cancer services in the bush.

2.7 Cancer Services in the Bush

As outlined previously, life in the bush holds many different and unique challenges for Australian men and women and the diagnosis of cancer adds another layer of challenges upon rural residents. Due to the magnitude and diversity of issues surrounding cancer in the bush, the following section provides an overview of the most pertinent issues, as each on its own would provide enough material for multiple doctoral theses.

For rural people diagnosed with cancer the treatment journey is often complex, with lengthy travel to treatment centres in major cities and time away from family, loved ones and familiar surroundings causing additional stresses at a time when support is crucial (Clavarino et al. 2002; Hegney et al. 2002; Hegney et al. 2005). Currently a significant body of research exists to explore health disparities, survival outcomes and difficulties experienced during the active treatment phase for rural and remote Australians (Coory et al. 2006; Heathcote & Armstrong 2007; Jong, Vale & Armstrong 2005; McGrath et al. 1999a, McGrath et al. 1999b; Mc Leod, Browne & Leipert 1998; National Rural Health Policy Forum and the National Rural Health Alliance 1999; Silveira 1997), but there is less evidence on how people experience recovery from a major illness in the rural setting. In many cases, once people have completed their active treatment phase, the focus is on getting well and moving towards recovery and cancer survivorship.

Access inequalities due to sociodemographic factors (Mandelblatt, Yabroff & Kerner 1999) and the centralisation of cancer treatment facilities in major cities and regional centres makes access to health services and health professionals difficult, with the tyranny of distance adding further pressure (Martin-McDonald 2003; McGrath et al. 1999a; Hegney 2005). During the acute treatment phase, some cancer patients may need regular treatment with adjunct therapies such as chemotherapy or radium and depending on their location this may or may not occur in or close to their place of residence. However, even in view of such services being on offer, a mapping of rural and regional cancer services in Australia (Begbie & Underhill 2007) revealed some major gaps in specialist service provisions, with key findings including:

- Only 21% of rural hospitals who administered chemotherapy had a resident medical oncology service, 14 % had access to a visiting service and 38% did not have resident or visiting medical oncology services, which was most prevalent with increased remoteness (p. 92).
- Chemotherapy was predominantly administered by specially trained nurses (61%), but with increasing remoteness, another trained nurse or General Practitioner would undertake this task (p. 92)
- Only 7% of rural hospitals administering chemotherapy (RHAC) had access to a radiotherapy unit with only 11 units available for 157 RHAC (p. 92)
- Despite most RHAC providing allied health care access, long waiting times, costs and restricted inpatient service made accessibility difficult (p. 92)
- A dedicated palliative care doctor was available to 22% of RHAC and 59% had a dedicated palliative care nurse (p. 92)
- Urgent access to psychological services was requested by 61% of all RHAC and issues with travel support were indicated by 65% (p. 92).

In view of these statistics, it is not surprising that rural, regional and remote Australians with cancer are experiencing challenges during their acute cancer treatment phase; however access to services is not the only limiting factor. Heathcote and Armstrong (2007) postulated that despite improved early detection and treatment producing positive long term outcomes for people with cancer overall, disparities in cancer outcomes continue to exist in rural and regional Australia. This also holds true for other countries such as America and New Zealand, with existing inequalities for rural and regional residents in relation to mortality rates from cancer (Higginbotham, Moulder & Currier 2001; Stamatiou & Skolarikos 2009). Factors largely influencing these disparities include greater levels of socio-economic disadvantage, access difficulties to specialist cancer treatment services, greater proportions of Indigenous peoples who are diagnosed with late stage cancer who are likely to receive poorer treatment (Hall et al. 2008; Heathcote & Armstrong 2007; Shugarman et al. 2008), lack of or limited access to screening services and advanced technologies (Jong, Vale and Armstrong 2005; Stamatiou & Skolarikos 2009), and variation in cancer management practices (Coory et al. 2006, Hall et al. 2008; Hayen et al. 2008; Jong, Vale and Armstrong 2005).

2.7.1 Treatment choices

Rural and remote locations not only influence possible adverse outcomes for people with cancer, but also impact on their choice of treatment. A study conducted in Newfoundland and Labrador of 484 adults, examining cancer treatment decisions between rural and urban residents, found that for rural residents, travel, drug and childcare costs were important factors in their treatment decision, with stage of disease and personal feelings being equally as important for rural and urban residents (Mathews, West & Buehler 2009). Other evidence suggests that rural women with breast cancer may be more reluctant to choose treatment options, such as breast conservation, that require long travel and follow-up treatments (Craft et al. 1997, Mitchell et al. 2006; Kok et al. 2006; Thompson et al. 2007). 1993 figures showed that 34% of rural women chose breast conserving treatment, such as lumpectomy in comparisons to 42% in urbanised parts of Australia, which often is coupled with adjunct therapies such as chemotherapy or radium (Craft et al. 1997). McGrath et al. (1999b) found that Queensland women from rural and remote locations expressed concerns about how the family would cope during their absence for treatment, and it appears that rural women are inclined to choose treatment methods that require less long term adjunct therapies which would necessitate travel and time away from family, friends and their work.

Similarities can also be found within the male rural population. A study by Hayen and colleagues looking at patterns of surgical care of men with prostate cancer in New South Wales showed that men in rural and more socioeconomic disadvantaged areas are significantly less likely to undergo radical prostatectomy, which has shown to reduce mortality from prostate cancer (2008). The authors concluded that the reasons for this variation are unclear, however lack of access to urologists are seen as one possible factor (Hayen et al. 2008). In light of evidence indicating that rural people show high levels of stoicism (Kellehear 1988), have higher beliefs in chance in relation to health attitudes (Howat, Veitch & Cairns 2006), and place greater emphasis on job security and family support than on health seeking behaviours (Burman & Weinert 1997; Elliot-Schmidt & Strong 1997), perhaps a possible explanation could be that rural men do not choose radical prostatectomy as it would mean time away from their work and families, which is even more challenging due to socio-economical pressures. Understanding the unique psychosocial characteristics and needs of rural and remote cancer sufferers may well be the key to understanding the deeper undercurrents contributing to the rural versus urban disparities in cancer survivorship.

2.7.2 Psychosocial care in the bush

Psychosocial care for men and women with cancer is a major element of cancer care and considerable energies have been channelled into understanding these needs. A substantial body of knowledge has been generated over the last twenty years in relation to the psychosocial needs of women with breast cancer when it became more recognised that this area was largely unexplored (Rogers-Clark 2002a). Much of this evidence formed the basis for the development of the ‘Clinical Practice Guidelines for the Psychosocial Care of Adults with Cancer’ (National Breast Cancer Centre and National Cancer Control Initiative 2003), as it became clear that many of the psychosocial issues faced by women with breast cancer were comparable and applicable to adults with other types of cancer. Ann Bettencourt et al. (2008) in a study of rural and urban breast cancer patients, found in the review of the literature, that the majority of studies on psychological adjustment for women with breast cancer focused on urban populations, despite the fact that rural people have been identified as an understudied population. This statement does indeed reflect accurately on the current state of knowledge in relation to psychosocial care of rural people, however it needs to be noted that even less research has been conducted involving rural men in comparison to rural women.

When considering the psychosocial needs of people with cancer, rural versus urban comparisons provide some insight into the different needs. A study by Girgis et al. (2000) identified a number of unmet needs for rural versus urban women with breast cancer. Most significant differences were found in the area of dealing with the fears of the cancer spreading or returning (55% rural versus 41% urban), information about what people can do to help themselves to get well (44 % rural versus 40% urban), information on cancer remission (45% versus 37%), dealing with anxiety and stress (40% rural versus 34% urban) and dealing with feeling down and depressed (33% rural versus 29% urban) (Girgis et al. 2000). However, results in some areas of need such as information provision and dealing with lack of energy and tiredness, were similar to or lower than that of the urban participants. Bettencourt and colleagues (2007) conducted a review of the literature on the breast cancer experience of rural women, which included 14 studies using large data bases and 27 qualitative and quantitative studies. They concluded that rural women had greater difficulties negotiating their traditional gender roles during and after treatment, required greater levels of information on their cancer and were less likely to access mental health services (Bettencourt et al. 2007). Similarly, Burman and Weinert (1997) in their study examining the concerns of rural men and women with cancer in relation to interpersonal relationships, self image, occupational concerns and health interactions, found that concerns that others would be afraid to talk to them, feelings of loneliness, embarrassment due to hair loss, lack of information provision, and job security and discrimination ranked most highly within this cohort. Considering the ten year time frame between these three studies, it is interesting to note that some of the challenges continue for rural cancer patients, some of which will not be easily resolved.

Even though similar psychosocial needs for people with cancer can be identified within the psychosocial domain, much of the psychosocial distress is caused by people having to be away from their loved ones for periods of time to receive treatment. There are a number of qualitative studies exploring how separation from family and friends at a time where support is essential and highly beneficial further exacerbates the psychological distress for rural people with cancer (Clavarino et al. 2002; Hegney et al. 2002; Hegney et al. 2005; Martin-McDonald et al. 2003; Sanson-Fisher et al. 2000). McGrath et al. (1999a) identified that in rural communities, informal networks of support play a vital part in the provision of emotional and practical support to women with cancer, but once women have to relocate for treatment this support network is no longer accessible to them. Acknowledging the importance of social support and how a lack of it can create distress for rural people with cancer, no research could be identified considering if being away from home may cause ‘disconnection from nature distress’, that is, having to relocate to a large regional or major city for treatment means being separated from the land, open spaces and familiar environments. This area is largely unexplored particularly in the nursing literature. Filling this gap in nursing knowledge may add another dimension to better understanding the complexities of the cancer experience in the bush.

Regardless of the many identified areas of need and inequality in cancer service delivery, not all is grim in relation to cancer in the bush. Some encouraging statistics in a recent longitudinal survey of Tasmanian women with breast cancer (Minstrell et al. 2008, p. 61) indicated that ‘in most instances the moderate-to-high unmet needs reported at three months post diagnosis were significantly lower than those reported in a previous Australian rural breast cancer sample from Girgis et al. (2000)', thus signifying positive changes in information provision and support by health services. It is yet to be explored if similar inroads have been made with people with other types of cancer.

2.7.3 Community support

It would seem that it is not only health services which have an impact on rural cancer patients. As mentioned previously, informal community support networks coupled with a strong sense of community and helping when help is needed, provide an important safety net for rural people during difficult times (Gorman et al. 2007; Hegney et al 2007). This is also one of the findings in the doctoral thesis of Cath Rogers-Clark in relation to resilience in rural breast cancer survivors (2002a). This qualitative study of nine women, conducted in rural southwest Queensland, showed that despite some of the negative aspects such as privacy and confidentiality, there were some important positive aspects of rural living. These included that emotional support and solace from a close knit community was important, being connected to the land helped them heal and their experience of being a rural woman made them feel strong enough to deal with their breast cancer (Rogers-Clark 2002b). Despite this being a relatively small study and gender specific, very little research has been done since these findings were published to further investigate and expand on them. Perhaps one main criticism of the current state of research into rural health and illness is, that despite the wealth of knowledge it has produced, there is a continued focus on a deficit rather than strength based approach. In fact, Rogers-Clark concluded that 'the positive aspects of rural living are dismissed and replaced with images of decline and hardship' which in turn could inadvertently add to the difficulties of retaining rural populations and attracting health professionals to rural and remote communities (2002b).

2.7.4 Rural health workforce

Ongoing difficulties in recruiting and retaining health professionals to rural and remote locations add significant pressures on how rural people are cared for during their cancer journey. Some of the key factors stated as contributing to this shortage include the inability to get time away for recreational leave, lack of professional support, excessive workloads and lack of support for after hour care (Humphreys et al. 2002). As mentioned previously in relation to gaps in cancer service delivery, attracting cancer care specialists to the bush poses an even greater challenge due to a limited pool of specialists and low case loads in rural communities, thus making permanent placement non-viable (Jong, Vale & Armstrong 2005). Jenkins (2006) asserted that nurses can play a vital part in assisting people with cancer beyond their acute cancer treatment. Cancer nurse specialists, such as breast care nurses, will play an important part in filling some of the gaps in providing psychosocial and physical support to cancer patients and working in partnerships with General Practitioners.

From a health care professional perspective, caring and supporting people with cancer in rural and remote communities can be difficult and demanding. Kenny et al. (2007) in their qualitative study looking at rural generalist nurses' perception of the psychosocial care provision to people with cancer living in a rural setting demonstrated that clinicians are faced with emotional exhaustion as part of their role. This study found the nurses working in a rural hospital in Victoria in Australia had difficulties providing adequate care for cancer patients due to lack of staff, specialist knowledge and unsuitable facilities. Nurses also found that their dual relationship of being a member in a small community as well as a health professional had some benefits, but this relationship was also emotionally draining and confidentiality issues were a challenge (Kenny et al. 2007). From a patient perspective there was some uneasiness sharing their personal concerns with a nurse with whom they had a personal relationship (Kenny et al. 2007). The authors concluded that clinical supervision may been an important strategy in reducing the emotional stress of nurses working with cancer patients (Kenny et al. 2007).

It is generally acknowledged that there are significant psychological issues associated with the diagnosis and treatment of cancer (Shepherd et al. 2008), and providing psychosocial support to rural people with cancer is not without its challenges for health professionals. A questionnaire distributed to health professionals (nurses, occupational therapists, social workers, psychologists and managers) in a rural region of Victoria found that 'the delivery of psychosocial care for cancer patients in rural Victoria is haphazard' (Lee 2007, p. 97). Diversity of professional models of practice and overlap or gaps in services were contributing factors, however the most significant findings were that regional and metropolitan hospitals and specialists were not referring patients to psychosocial support services and this was also the case for General Practitioners (Lee 2007). Continuity of support and lack of clarity of who should be the ongoing contact person also created difficulties (Lee 2007). The authors concluded that in view of the already existing challenges, such as lack of services and access to specialist care for rural people, existing services need to be creative and flexible and fully cognisant of the complexity of psychosocial needs of cancer patients. Service providers need to establish clear referral pathways and refer patients to the most appropriate services to ensure continuity of care (Lee 2007).

Sabesan and Piliouras (2009) postulated that there are a number of ways clinicians can reduce the disparity between rural and urban cancer patients. Patient education, reducing patient referral times, maintaining intensity of treatment in the rural setting, participation in clinical trials, teaching and mentoring of medical students and Telemedicine are seen as strategies in moving forward (Sabesan & Piliouras 2009). In view of recent developments in electronic-health, Telemedicine will certainly be one way of addressing some of the many health service inequalities faced by cancer patients in the bush (Maserat 2008; Olver, Shepard & Selva-Nayagam 2007). Video link-ups and an ever-increasing array of modern telecommunication devices are now making their way into rural communities with positive outcomes (Allen & Hayes 1994; Brignell, Wootton & Gray 2007; Doolittle & Allen 1997; Shepherd et al. 2008). This is worthwhile noting to complete the picture of cancer in the bush, however an area outside the scope of this dissertation and therefore not discussed in greater detail.

In summary, cancer causes significant burden on many levels in Australia and worldwide. Morbidity, mortality and all other associated effects on the individual, their family and the community as a whole are well documented. Statistics indicate that cancer occurrences are unlikely to reduce in the future, however better treatment methods and supports have made major headways in the way of improving survivorship and quality of life of cancer patients. Notwithstanding these positive developments, people from rural and remote locations continue to be disadvantaged in many areas of cancer treatment and follow up. A multitude of factors are contributing to these problems and much of the current literature demonstrates the failures and gaps in service delivery. A substantial pool of evidence has been developed around the issues of breast cancer and this has provided some good insights into the issues facing women with this disease. However, generally speaking, evidence surrounding rural and remote specific evidence remains limited compared to studies with urban counterparts. Men appear to be also underrepresented in the literature and considering the cancer statistics in men, this requires higher level of attention. It would also be beneficial to invest research interests into other cancers beside breast cancer in order to better understand the unique challenges each type of cancer brings. Lastly, despite much research clearly identifying where the gaps are, it would be worthwhile to examine the strengths rather than deficits in cancer care as a way of learning, building on and sharing such knowledge with cancer patients and health care providers.

As indicated in the cancer statistics, more people are now living through and beyond cancer. These developments are positive for people diagnosed with cancer, but mean new and emerging shifts in how health professionals care for these people long term. This area is still largely under explored in the health literature and the next section will provide some insight into the current discussion surrounding cancer survivorship.

2.8 Cancer Survivorship

The process of recovery is an important phase for the individual as it often marks the end of the acute treatment phase and the beginning of the healing process, however surviving cancer can be an enduring battle (Mason 2006). The diagnosis of cancer which was once perceived as an incurable disease has now much better odds with many Australians living through and beyond their cancer experience (Boyle 2006). Jacobson and Greenley argued that although 'recovery' is something that is widely talked about, there is still a lack of understanding of what the actual experience of 'recovery' means to the individual and how health professionals and policy-makers can facilitate this process (2001). Faithfull (1994) explained that some confusion exists about the aims of cancer care in relation to the debate between curative and palliative care. In contrast to medicine's perspective of cure meaning that the individual is free of disease, many patients see cure not only as being disease free but being able to resume life as it was prior to having cancer (Faithfull 1994). Cancer survivorship literature is a more recent emerging area of interest for nursing, due to increasing numbers of people living with cancer as a chronic disease or indeed being cured. The following section on cancer survivorship will briefly look at current Australian survival data, but the main focus is on the individuals' experience of cancer survivorship in relation to quality of life, coping and challenges.

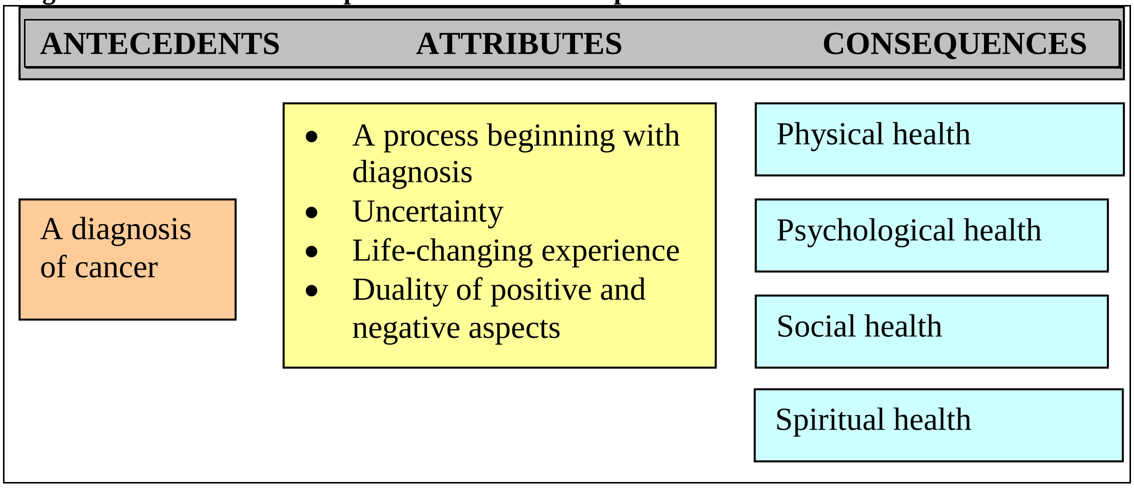
As discussed previously, improved screening, early diagnosis and advanced treatment methods have greatly improved the prospect of cancer survivorship (Aziz 2002; Kaplan 2008). Statistically speaking for males and females the five year cancer survival has significantly improved with 1982-1986 data compared to 1998-2004 data showing an improvement from 41% to 58% for men and 53% to 61% for women (Australian Institute of Health and Welfare, Cancer Australia & Australasian Association of Cancer Registries 2008). For men the most improvements in the five year relative survival have been achieved in prostate cancer, kidney cancer and non-Hodgkin lymphoma, and for women in kidney cancer, breast cancer and non-

Hodgkin Lymphoma (Australian Institute of Health and Welfare, Cancer Australia & Australasian Association of Cancer Registries 2008). In relation to survival by age of diagnosis, the 20-29 year old age group had the highest five year relative survival, yet for the over 65 year old age group the survival rate is around 51% (Australian Institute of Health and Welfare, Cancer Australia & Australasian Association of Cancer Registries 2008). When looking at survival by region, the more remote the person lives, the lower the rate of survival, with this trend being more prominent for males, as for females the five year relative survival is similar across the regions (Australian Institute of Health and Welfare, Cancer Australia & Australasian Association of Cancer Registries 2008). For Queenslanders, 1996 and 2000 data show that their five year relative survival was 63.5% and similar to that reported in Australia, the United States and higher than European countries (Youlden, Baade & Coory 2005, p. 4)

Most of the available literature on cancer care focuses on the issues surrounding the acute survival stage, though for the purpose of this study, the focus will be on the long term survival stage. The selection criteria for the participants in this study were that they had completed their acute treatment phase and were post 12 months of diagnosis. Therefore most of the issues faced during the initial survival phase are no longer relevant to this group of participants. According to Aziz (2002), a person's cancer experience and the physical and psychosocial effects can vary greatly at different times of their journey thus affecting their perceived quality of life and the meaning of cancer for the individual. Aziz suggested that earlier survivorship perspectives are now being overtaken by newly emerging survivorship research and concepts such as lifestyle and health promotion, effects of co-morbidities, family issues and developmental and life-stage perspectives, need increasingly to be incorporated into modern cancer care (2002). Hence, considering the current lack of knowledge on physical health and quality of life outcomes in the cancer literature, this is an important area for growth (Aziz 2002).

In the face of promising statistics it would appear that it is becoming increasingly important for health professionals to fully grasp what cancer survivorship may mean for the individual and their family. To gain a deeper understanding it is worthwhile to examine the concept of ‘survivorship’ more closely. Natalie Doyle (2008) in her quest to conduct a concept analysis of cancer survivorship in adults, including 43 published documents from 1994 to 2006, produced four main themes: physical, psychological, social and spiritual health (p. 499). Doyle was motivated to undertake this work upon recognition that in spite of cancer survivorship frequently appearing in the literature, definitions were not well defined and the concept was unclear (2008). The following model demonstrates Doyle’s findings (2008, p. 506)

Figure 3: Model of the concept of cancer survivorship.



According to Doyle (2008) the most common attributes of cancer survivorship identified in the literature are that the journey of survivorship starts with the initial cancer diagnosis which unfolds a cascade of major, life changing events marred with uncertainty and realisations of positive and negative impacts. The consequences of cancer survivorship can be categorised into four domains, identified by Doyle in the area of physical, psychological, social and spiritual health (2008). In line with Doyle’s model, this review on cancer survivorship will focus predominantly on the identified attributes and consequences.

2.8.1 Defining cancer survivorship

The concept of survivorship is complex and according to Doyle there are many different schools of thought when cancer survivorship begins. She argues that ‘to find a term for life after cancer diagnosis that satisfies all stakeholders may be a major linguistic challenge’ (Doyle 2008, p. 03). According to Rogers-Clark (2002a) the notion of survivorship has its roots in World War II literature, with people who suffered ordeals during their internment in Nazi concentration camps as well as people who survived the nuclear bombing of Hiroshima in 1945. Some of the language used to describe the experience of living with cancer often associated with warfare, such as ‘battling’ or ‘fighting’ cancer and being ‘courageous’ and ‘brave’. Commonly the term ‘survivor’ is also used to describe a person who has ‘lived through life traumas such as being in a concentration camp, experiencing domestic violence, sexual abuse, and living with cancer’ (Rogers-Clark 2002a, p. 16). Moving through and beyond the experience of cancer must surely feel like a victory for cancer survivors, beating the unwelcome invader of their bodies.

Definitions of ‘cancer survivorship’ can vary greatly depending on the perspective of the descriptor and the purpose of description. From a biomedical perspective and for statistical purpose, cancer survival is described in terms of remaining disease free for five years (Australian Institute of Health and Welfare, Cancer Australia & Australasian Association of Cancer Registries 2008; Boyle 2006; Rowland, Hewitt & Ganz 2006), yet how individuals and their family describe their survivorship journey may differ significantly. Rowland, Hewitt and Ganz (2006) described how 23 founding members of the National Coalition for Cancer Survivors (NCCS) met in 1986 in Albuquerque USA to discuss moves away from describing survival within the traditional five year disease free survival concept. The members instead agreed to label a ‘cancer survivor from the moment of diagnosis and for the balance of life, regardless of whether death was ultimately due to cancer or some unrelated cause or event’ (Rowland, Hewitt & Ganz 2006, p. 5101).

To a large extent, the current cancer survivorship literature focuses on the many obstacles people face during the various stages of survival. One way of conceptualising the cancer survival journey, is by describing it within three stages of survival. Kaplan (2008), based on information from Fitzhugh Mullan (1985), a founding member of the National Coalition for Cancer Survivors and a cancer survivor, provided a description of the stages of acute, extended and permanent survival. The first stage or ‘acute survival’ is the period from diagnosis through the initial treatment when people have to cope with the effects of the therapy, being confronted by their own mortality with accompanying fear and anxiety (Kaplan 2008). Family and community support are very important during this time, although the needs of the family are often overlooked (Kaplan 2008). The second stage or ‘extended survival' follows the acute treatment phase with people beginning to return to their normal life (Kaplan. 2008, p.989). During this stage, regular check ups are still required and people have to deal with the after-effects of their treatment and their physical changes, such as changes in body image or fatigue (Kaplan 2008). A fear of reoccurrence is often strongly in the mind of the cancer survivors and psychosocial support is important (Kaplan 2008). The last stage or ‘permanent survival’ is reached when an extended disease free survival has been reached with low likelihood of recurrence (Kaplan 2008). Permanent survival is perceived as adjustment to the altered self, but long term physical effects may continue (Kaplan 2008). Some people may also experience issues surrounding employment or health insurance and the implementation of good health promotion strategies is vital (Kaplan 2008)

A phenomenological study conducted by Breaden (1997) eloquently captures the survivorship issues identified by Doyle (2008) and Kaplan (2008). Eight women, who were post active treatment phase, describe how their cancer diagnosis caused an interruption of the intimate relationship they had with their bodies, bodies which would never quite be the same as prior to diagnosis and became a house of suspicion with the ability to regrow the cancer at any time (Breaden 1997). The perception of the future was also marred by the uncertainty about how much survival time would remain, however the women also spoke of feeling lucky to be alive and sharing their survival with family and friends (Breaden 1997). Reflecting on the experience of these eight women, it appears that cancer survivorship is indeed a double sided sword and despite the challenges there are also positive outcomes. Admittedly though, cancer survivorship is a complex concept which is probably most expertly defined by the person experiencing it and Leigh, Williams and Stoval (1998, p. 1711) provided a good insight into the complexity:

> ‘Survivorship is not just about physical survival or about staying alive at all costs. It is not simply defined within a time frame (5 years) or as an outcome (cured) or viewed as a stage of survival (off therapy). Rather, it is about the quality of their survival, both on and off therapy, cured or not cured. It is also about access to care for everyone: about a health care system that values caring over costs, about choices and options in providers and therapies, and an activism by those who feel a responsibility to change priorities’.

2.8.2 Physical health and cancer survivorship

In order to gain a deeper understanding of what the consequences of surviving cancer may be for the individual and their family, following Doyle’s model, the physical, psychological, social and spiritual health aspects of the individual need to be considered. Cancer treatment in many ways can leave a multitude of scars, physical and emotional. Depending on the type of cancer and disease stage, cancer survivors may undergo surgery to remove the diseased tissue, often followed by some form of adjunct therapy like chemotherapy or radiotherapy. A plenitude of health literature is available to discuss the immediate effects of the varying treatments; however literature on the issues surrounding post acute treatment and health is sparse and dominated by American research.

Baker et al. (2005) in their study of 752 cancer survivors in Iowa, Minnesota and Georgia (USA) on how they were faring one year post diagnosis, identified that concern for recurrence and fear of future outcomes were noted in over 50% of the sample, with 76.1% of people reporting physical problems such as fatigue and loss of strength and 47.9 % reporting sleep difficulties and 41.2% sexual dysfunction (Baker et al. 2005, p. 2565). A quantitative study by Deimling et al. (2006a) examined cancer related health concerns and psychological distress in older long term survivors, with 321 randomly selected cancer survivors in Cleveland (USA) taking part in face to face interviews incorporating a number of measures. This study, just like Baker's study, found that participants reported continued health worries which persisted beyond the five year survival stage, with fear of recurrence and being diagnosed with other cancer being of prime concern (Deimling et al. 2006a). Co-morbidities and functional difficulties also played a major role in older long term survivors, with depression and anxiety being noted in about a quarter of the sample (Deimling et al. 2006b). Despite some of the identified health worries and psychological distress, overall the quality of life for older long term survivors was not significantly compromised on a physical or psychological level (Deimling et al. 2006b). Considering these two studies, the physical and psychological health in relation to cancer is closely linked and needs to be considered in unison. Even though cancer begins as a physical manifestation, physical removal and aggressive treatment with chemical and radioactive agents may not eradicate the imprint it leaves in the psyche of the cancer survivor.

2.8.3 Psychological health and cancer survivorship

Meeting the psychosocial needs of cancer survivors continues to challenge the health industry with reports of varying levels of unmet needs in the emotional, physical and treatment related domain for long term survivors (Barg et al. 2007). Similarly, Sanson-Fisher et al. (2000) identified high levels of unmet needs in the area of physical and psychological health, health system and information support, daily living issues, patient care and sexuality for people still undergoing treatment. Meeting these needs long term, remains an area that has only been receiving attention in recent times. For some people these needs are met by seeking out complementary and alternative medicine as a way of gaining back control and influencing their future state of well-being. A very recent and first quantitative Australian study on cancer patients who use complementary and alternative medicine

(CAM) found that participants described ‘feelings of control, power and individual autonomy within therapeutic processes thus creating a liberating and positive engagement with the use of CAM’ (Broom 2009, p. 71). However, this represents only one example of the many ways people choose to deal with their cancer diagnosis in practical terms and it seems that emotional coping is essential in view of long term cancer survivorship.

How people cope with their cancer diagnosis on a psychological level has been of interest to health professionals, particularly in the field of psychology. Terms like Quality of Life (QOL), coping, resilience, adjustment and adaptation are areas under investigation when considering cancer survivorship at its varying stages. Zebrack (2000) conducted a literature review on cancer survivorship and QOL and identified this concept to be multidimensional and subjective in nature, hence it is critical to capture the experience of the individual in order to provide adequate psychosocial support. This view is similar to Leigh, Williams and Stoval who explained that ‘many people who have histories of this disease feel that survivorship extends far beyond the restrictions of time and treatment and must include the diverse issues that comprise the subjective area called quality of life’ (1998, p. 1711).

Quality of life was the focus of a large quantitative study using a questionnaire containing a number of tests, such as Life Orientation Test, administered to 2,573 military women who had survived cervical cancer and were 1 to 20 years post diagnosis (Gotay et al. 2008). The study showed that despite their experience with cancer, the women in this study had a quality of life comparable to that of the population normative values (Gotay et al. 2008). Likewise, Wenzel et al. (2002) found in a group of women with ovarian cancer, that the disease free early stage diagnosis group also enjoyed a good QOL in combination with physical, social and emotional well-being comparable to other cancer survivors. QOL issues was one area explored in a qualitative study by Foley et al. looking at the experiences of 58 long term American cancer survivors in relation to cancer type, ethnicity, gender and age (2006). The study demonstrated that most long term survivors reported that their cancer has had a positive influence on their lives and had made little impact in the long term (Foley et al. 2006).

Another, not surprising, finding of the study by Foley was that people who perceived their cancer as personal growth reported the highest QOL, with the opposite being true for people who resented their cancer (2006). This result is echoed in the work of Aspinal and MacNamara (2005) who asserted that ‘positive emotions and beliefs seem not only to be associated with good outcomes among people experiencing adversity, but also play a role in realising them’ (p. 2549). It would appear that optimism and hope play an important part in positive cancer survivorship experiences (Deimling et al. 2006b; Doyle 2009; Jacobson & Greenley 2001; Silverman 2007), but Broom warned that hyper-positivity can be counterproductive and in fact conceal underlying fears and grieving processes (2009). Interestingly, the potential advantages of positive emotions and beliefs are that they can also influence the ability of mobilising and maintaining social support (Aspinwall & MacNamara 2005), which is an important aspect in cancer survivorship and will be discussed in more detail as follows.

2.8.4 Social health and cancer survivorship

When considering cancer survivorship from a social health perspective, undoubtedly the impact of living with, through, and beyond cancer must also be felt by the families of cancer survivors. Experiencing a loved one undergoing extensive periods of treatment which can cause severe side effects and suffering, followed by years of recovery and uncertainty can be a difficult time for families. Conversely, being unable to support the family, dealing with overprotection and expectations by family or friends and needing to heavily rely on their support, may add to the stress of cancer survivors (Holland & Reznik 2005). But regardless of what would appear to be an important relational issue and worth consideration in relation to cancer survivorship, research in this area is still relatively scant.

An American cross sectional study by Bowman, Rose and Deimling (2006, p. 834) on the appraisal of the cancer experience by family members and long term survivors established that in general ‘family members appraised the cancer experience more stressful than their surviving relatives’, with the stage of the cancer at diagnosis being associated with greater levels of stress for family members. A study by Mellon and Northhouse (2001), of 123 randomly selected families in Michigan (USA), looking at family survivorship and QOL following cancer diagnosis, showed that the strongest predictors for family quality of life was ‘concurrent family stressors, family social support, family member fear of recurrence and family meaning of the illness and patient employment status’ (p. 446). These findings are comparable to those of Edwards and Clarke, who identified that family functioning and the patients’ illness characteristics were closely linked to families’ level of depression and anxiety (2004). Families who were communicating openly with opportunity to share feelings and solve problems effectively were found to have lower levels of depression (Edwards & Clarke 2004)

The mutual support by family and friends is often pivotal for many cancer survivors during their journey, and not being able to have regular contact with family and friends during the acute treatment phase has shown to cause distress for people with cancer (Hegney et al. 2002; Hegney et al. 2005; McGrath et al. 1999a). In the study conducted by McGrath et al. (1999a), cancer survivors expressed the importance of family support, whereas family members were predominately concerned about the future outcomes and delivering effective support to a family member with cancer. Similarly, Maly et al. (2005) identified that older women with breast cancer found their partners and adult children an important source of mental health support. But support of family and friends may not always last the distance. Even though cancer survivors receive plenty of support during the period of diagnosis, support recedes significantly after the first year (Arora et al. 2007). Consequently, Arora pointed out that more energy needs to be channelled into supporting cancer survivors long term to assist with the adjustment to their illness (2007).

Furthermore, it appears that the role of family of long term cancer survivors not only has implications for their loved one, but also for family members themselves. The participants in a qualitative study described finding meaning in the illness of their loved one by focusing on the positive aspects such as valuing life and family relationships and emphasis on healthy lifestyles (Mellon 2002). In support of this view, a study by Bowman, Rose and Deimling (2005) established that family members acted as advocates to promote good health maintenance and provided care giving during the diagnosis and treatment periods. Interestingly, alongside advocating for good health practices for their relatives, they also demonstrated high levels of health maintenance activities in relation to their own health (Bowman, Rose & Deimling 2005). Again such evidence indicates that there are many facets to cancer survivorship, not only to the person with cancer, but also to their loved ones. Support from family and friends during the entire cancer survivorship journey is vital and is assisted by tangible and practical hands on support, but for some cancer survivors there are additional sources to draw strength from.

2.8.5 Spiritual health and cancer survivorship

As identified by Doyle (2008), ‘spiritual health’ plays an important part in the cancer recovery of many people. For some people the concept of spirituality is synonymous with religiosity (Baldacchino & Draper 2001) though this concept should be viewed in a much broader context in order to capture its significance. A literature review on the meaning of spirituality conducted by Dyson, Cobb and Forman (1997) revealed that the key elements in the literature defining spirituality centred on the self, others and ‘God’, with elements within the definition of hope, relatedness, connectedness and beliefs. McEwen (2005) described the characteristics of spiritual well-being as a belief in a supreme being; a need to meaningful relationships; inner harmony; self determination; good support systems and an appreciation of nature and a sense of connectedness with others and the universe. Baldacchino and Draper portrayed spiritual coping similarly as involving relationships with self, others, Ultimate other, God or nature (2001). Within health care environments, and particularly nursing, recognition of the inseparable link of spirituality within the framework of physical, psychosocial and social health has been increasingly recognised, calling for nurses to include spiritual care as part of their holistic practice (Lo & Brown 1999; McEwen 2005; McManus 2006; Morgan 1998; Skalla & McCoy 2006).

As outlined previously, quality of life is an important component of cancer survivorship and according to Ferrell et al. (2003) spirituality is a specific aspect of QOL. Their study of women with ovarian cancer found that spirituality was an important component of the QOL experience of the participants. Similar results were found by Halstead and Hull (2001) in a study of ten women with breast and ovarian cancer and non-Hodgkin's lymphoma five years post diagnosis. Not only did their study identify the importance of spirituality but also its individualised and developmental nature, meaning that spiritual growth occurs over time following diagnosis (Halstead & Hull 2001). An analysis of accounts by people who described their recovery process also showed that key feelings assisting in the recovery included hope, empowerment, healing and connection (Jacobson & Greenley 2001), which likewise have been identified as elements of spirituality (Dyson, Cobb & Forman 1997).

Although Jacobson and Greenley (2001) described 'connection' specifically in relation to connecting to the social world, Haase et al. (1992, p. 837) stated that connectedness is 'richer than social support…as it is a significant, shared and meaningful relationship with another person, a spiritual being, nature or perhaps an aspect of one's inner self'. This aspect of spirituality and connection to nature particularly in relation to cancer has to my best knowledge not previously been explored; however the following section on healing environments will closely examine the therapeutic benefits of being connected to nature.

Cancer survivorship has many faces and is unique to every individual and their situation. The biomedical view and that of cancer survivors differ greatly but the strong voice of cancer survivors ensures that their concerns are being heard. When considering long term survivorship, Deimling et al. (2006b) noted that 'the years, and for some individuals the decades since diagnosis, have placed temporal distance between the original shock of a cancer diagnosis and treatment trauma, and their current lives' (p. 156). Depending on their situation, cancer survivors tap into a number of internal and external resources to assist in their journey, with positivism, family, social networks and spiritual beliefs forming a solid foundation for long term survivorship. Despite the slow emergence of different models of care, extensive work is needed to investigate the long term needs and to reach out to cancer survivors beyond their twelve months post diagnosis. This will however greatly depend on the perception of the individual and if they are willing to continue to be reminded of their cancer diagnosis or prefer to 'just get on with life'.

2.9 Healing Environments

The World Health Organisation (1992, p. 409) clearly identified that the ability to manage human interaction with the physical and biological environment greatly influences health, and the benefits of the natural environment and its positive effect on the physical and mental health of humans are increasingly recognised. In the past, much emphasis has been placed on environmental hazards and their impact on health, but there is a growing recognition of the benefits to life satisfaction, quality of life and health and well-being through contact with the natural world (Brown et al. 2005; Frumkin 2001; Mayer & Frantz 2004; Millennium Ecosystem Assessment Board 2003; Ogunseitan 2005). Kaplan and Kaplan described the human relationship with the natural environment as both pragmatic as well as spiritual, with the pragmatic side including direct mental and physical health benefits and the spiritual side creating a feeling of being 'at one with nature' (1989, p. 197). The following section on healing environments will discuss some of the fundamental thinking in this field, with emphasis on the health benefits of the human-natural environment connection.

2.9.1 Human connection with nature

Much of the early works of Berman (1981), Wilson (1984), and Kaplan and Kaplan (1989) have paved the way for research linking human health and well-being with connection to nature. According to Frumkin, a deep seated connection to nature can easily be identified from an evolutionary perspective and has been widely depicted in philosophy and art since the beginnings of ancient history (2001). The term 'biophilia' coined by Wilson (1984) describes the innate connections human beings have to all other living organisms. Berman (1981), in his book 'The Reenchantment of the World' provided an in-depth discussion on the human interconnectedness to nature throughout history. He explained:

> 'The view of nature which predominated in the West down to the eve of the Scientific Revolution was that of an enchanted world. Rocks, trees, rivers, and clouds were all seen as wondrous, alive, and human beings felt at home in this environment. The cosmos, in short, was a place of *belonging*. A member of this cosmos was not an alienated observer of it but a direct participant in its drama. His (sic) personal destiny, and this relationship gave meaning to his (sic) life' (Berman 1981, p. 16).

As described by Berman, humans have a long and intimate relationship with their natural environment, not only to sustaining life through the provision of shelter, food and water, but also for emotional and spiritual well-being (Frumkin 2001 & Wilson 2001). This sense of connection to the natural world and its link to health and well-being is also discussed by Brown et al. (2005) who asserted that the human connection to nature is deeply spiritual and that it is absolutely vital for health workers to understand the significance. However, Brown et al. (2005, p. 65) remarked that this connection is 'something not governed by reason alone', alluding to the fact that connection to nature is a very individual construct which cannot be easily defined. According to Pesek, Helton and Nair (2006), Western culture and in particular modern medicine often disregards the holism of mind body and spirit, however they asserted that 'we are not disconnected from the natural world in terms of health, but dependent and interconnected within ourselves and everything around us' (p. 114). This view is shared by Hufford and Chilton (1996) who described how the spiritual view of many 'alternative' health systems (i.e., not main-stream) recognises the strong links between personal, social and environmental health. In these conceptions of health and well-being, humans are seen as part of the chain within the natural world, not as an identity outside this chain. The concept of 'holism', a cornerstone of nursing models of care, acknowledges that disease is situated within a larger system and can be a result of environmental causes, as well as the individual's relationship to that environment (Hufford & Chilton 1996). This approach also sees the healing of disease by the way of encouraging 'emotional growth, deepened relationships, a more intense and aware perception of the environment, spiritual awakening, or a more graceful cooperation in the natural processes of the world' (Hufford & Chilton 1996, p.62).

In recognising how important the connection to nature has been to human existence, Berman feared that the 'dis-connection' from nature in modern times with its scientific and technological focus will affect the health and well-being of humans, particularly their mental health (1981). He asserted:

> 'Scientific consciousness is alienated consciousness: there is no ecstatic merger with nature, but rather total separation from it. Subject and object are always seen in opposition to each other. I am not my experiences, and thus not really part of the world around me'… 'The world is not of my own making; the cosmos cares nothing for me, and I don't really feel a sense of belonging to it. What I feel, in fact, is a sickness in the soul (Berman 1981, p. 17).

Cecily Maller shared a similar view and adds that reportedly in today's world people are experiencing a spiritual emptiness, with the futile attempt to compensate with the use of alcohol, drugs and food addictions, yet some of this emptiness may have its origins in the loss of contact with nature (2008). Likewise, Chesworth (1996) saw 'dis-ease' situated within a larger environmental system, influenced by the processes within the environment but also by the relationship the person has to the environment. Within this context, healing can be seen as a way of re-establishing the 'proper state of the environment and the sick person's place in it' (Chesworth 1996,

p. 62). Gesler (2005) added that what is seen to be therapeutic can vary over time and is therefore strongly context dependent and dependent on its significance to the individual and their personal situation. Lewis Mehl-Madrona (2005) argued that despite the concept of healing being very individual and highly variable across the spectrum of people, what needs to be investigated is not what cured people, but how people transformed. In this context and recognising the uniqueness of the experience and the potential influence of the health of the environment on people's health, what is of particular interest for this PhD study, is the notion of how healing may occur with the 'sick person placed' in his or her environment.

2.9.2 Defining therapeutic landscapes

The concepts of 'therapeutic' landscapes or 'healthy' places are frequently viewed by health geographers as places that promote healing, or enable their inhabitants to sustain good health (Gesler 1992; Gesler 2005). According to Milligan (2003) it is only since the late 1970s that the complex relationship between humans and their environment have been investigated. Jonas et al. defined 'healing spaces' as a 'physical environment, including the visual aesthetics, sound, music, smell, taste, lighting, air, water, art, horticulture, architecture and conditioning process that support and stimulate recovery and repair processes' (Jonas et al. 2003, p. 39). For example, a hospital study found that people who had views of fields or trees from their hospital room window had reduced needs for pain and anxiety medication, reported fewer complaints, and had shorter hospital stays (Ulrich 1984). Walch et al. found that patients who had undergone spinal surgery and received natural sunlight during their postoperative phase, showed lower levels of stress and used less pain medication (2005). A Finnish study of perceived health and visiting natural favourite places, involving 211 participants who replied to a 16-page questionnaire, demonstrated that people with certain health complaints such as headaches or stomach pains, were more likely to select natural favourite places to visit and benefited mostly on an emotional level (Korpela & Ylén 2007). Kaplan too found that natural environments were particularly helpful in their restorative effect in relation to fatigue (1995). According to Frumkin and Louv (2007), there is still a lot to learn about the healing benefits of nature, however enough is known to recognise the health and well-being benefits and promote these to the wider community.

2.9.3 Animal therapy

Contact with nature does not only entail a relationship with the land, but also interaction with other life forms present. The increasing trend for people to reconnect with nature and its animals within can be observed in many ways (Jordan 2009; Vining 2003). In Australia, the yearly migration of the whales does not only attract many tourists, but local people alike. Fishing and feeding of wildlife is a popular activity connecting people with native wildlife. Bushwalking and observing animals in the wild is also a popular leisure activity and taking part in a wilderness experience (rather than just observing) has shown to be of benefit for people with metal health problems as well as physical ailments (Frumkin 2001). There is also an emerging focus on the potential benefits of pet therapy and companion animals. Pet therapy has been increasingly introduced into hospitals, disability services and aged care facilities with positive results.

A study by Cole and colleagues (2007) involving animal assisted therapy used with hospitalised cardiac patients found that it improved cardiopulmonary pressures, neurohormone levels, and anxiety levels. Animals have also shown potential in providing companionship and solace to mental health patients (Daniels 2008); have helped children with developmental difficulties to be more playful, focused and socially aware (Martin & Farnum 2002); have provided relaxation and reduced agitation and aggression in people with dementia (Williams & Jenkins 2008); and created a more enjoyable and relaxed atmosphere during therapy for patients with aphasia (Macauley 2006). A study conducted by Wells (2009) to investigate the association of pet ownership and self-reported health status with people with chronic disease, showed that despite no significant statistical evidence that pet ownership had any direct physical health benefits; the owners reported that their pets increased their quality of life and mental well-being. Margo Halm (2008) in her review of the healing powers of the human-animal connection concluded that animal assisted therapy can promote healing through intentionality and developing personal wholeness which can be transformational for both patients and staff. Undoubtedly the connection humans form with animals, either indirect or direct, have been shown to have a multitude of benefits to people of all ages and conditions.

2.9.4 Outdoor therapy

As mentioned previously, thoughts on how changes in our lifestyles with the growing development of urban environments may influence human health and well-being will be an important part of future health planning. St Ledger (2003) proposed that much of the health benefits and protective factors from our relationship with nature have been reduced by our declining contact with nature, and suggest that health policy must focus on this issue more closely. Development of open areas where people can have contact with plants and animals will be important to re-connect people in more urbanised communities (Kaplan & Kaplan 1989; St Ledger 2003). In fact, encouraging work has been undertaken to investigate the relationship and benefits to people who have access to parks and gardens (Maller 2008; Maller et al. 2002). Laurine Field in her PhD thesis on the role of gardens in the lives of contemporary Australians wrote:

> ‘Gardening for many Australians is a spiritual experience. It is perceived as a powerful way of dispelling feelings of resignation and helplessness associated with the environment or life in general. The gardener can care for his or her plot – a symbol of the land, whilst being self-nurturing in creating a haven for their own existence that expresses their vision of the world’. ‘Gardening can be a means of personal and ecological healing and gardens clearly have many life-enhancing qualities for the community and the individual’. (Field 2006, p. 6)

Connecting and interacting with nature can occur on a number of levels, either as an active participant such as creating a garden or as a passive observer, such as walking through a park or having a picnic in the bush. Active land management was the focus of an Australian study of 102 people involved in the management of land for conservation in six rural communities in Victoria (Moore, Townsend & Oldroyd 2007). The results indicated that this group rated their general health higher, visited the doctors less often, felt safer in their community, were more willing to work on improving their community and utilised their lifetime skills more frequently than the control group (Moore, Townsend & Oldroyd 2007). A quantitative study of 250,782 people in the Netherlands, investigating green space and health in urban areas, found that particularly the elderly, youth, lower socioeconomic groups and secondary educated people who lived in an area surrounded by green space within a one and three kilometre radius, reported better general health compared to people who had limited green space surrounding them (Maas et al. 2006). Cecily Maller (2008) in her extensive review of the literature looking at the health benefits of having contact with nature in a park context, identified that access to nature plays a vital part in human life and access to ‘green nature’ in form of parks and natural environments are indeed a fundamental and important preventative health resource.

2.9.5 Healing health care environments

Access or connection to nature and the multitude of associated health benefits feature strongly in the literature; but in spite of this supporting evidence, recognition within the health planning arena remains poor. An English report on nature and psychological well-being concluded that despite good evidence outlining the benefits of this connection, no agency ‘has yet made the vital link between the potential positive impact nature could have on psychological well-being as a discrete outcome’ (Seymour 2003, p. 14). This finding is shared by Maller (2008) who concluded that despite the evidence that parks and natural settings have health promoting benefits by creating a sense of well-being, this has until now not been fully recognised.

When considering other environments where healing is to occur, Lisa Day (2007) in her discussion on healing environments within a critical care setting pushed for health professionals to see beyond monitors and randomised controlled trials. She suggested that health professionals must commit to ensure that patients’ senses are soothed by viewing a garden or forest through the hospital window, being touched by a caring nurse or doctor and smell something other than stale urine disguised by hospital antiseptic (Day 2007). Furthermore, Frumkin suggested that health professionals alongside a multitude of other professionals, such as urban planners, architects and geographers, need to work collaboratively to develop more sustainable environments that are supportive to human health and well-being (2003). In fact he predicts that once the evidence becomes clearer on the health benefits of certain environments or interactions with the natural world, clinicians may advise their patients to take a few days in the country, spend time gardening or adopt a pet as a way of therapy (Frumkin 2001).

As illustrated, recovering from an illness and healing the mind, body and soul can on many levels be enhanced by connecting with nature and its many life forms. This connection may be on a direct, intimate level, or indirect and observational, however the evidence suggests that any type of engagement can have physical, mental and spiritual benefits. Healing environments can mean different things to different people; however it is important that people continue to have access to natural environments that are perceived as being tranquil, restorative and soothing. Health professionals need to be more proactive in recognising the significance and potential of this healing connection and work with their patients to assist their healing journey not only on a physical level.

2.10 Conclusion

In summary, this review of the literature in relation to rurality; connection to land; the experience of cancer and cancer survivorship and healing environments has been interesting, informative and thought provoking. Rural people are intrinsically linked to their environment and this relationship affects their lives on many levels. The Australian rural environment and its people are in many ways unique and highly resilient, but on the other hand vulnerable and fragile. Health and illness in a rural environment, in particular a diagnosis of cancer, poses many challenges and requires the ability to draw on personal strength as well as the support of family, friends and community. The findings in the literature in relation to rural people recovering from cancer indicates that currently we have a poor understanding of what it means for this group to feel a strong connection to the land and how the connection affects the recovery process. This lack of understanding, combined with the recognition that people living in rural communities may not have access to a variety of essential health and support services to assist them during their recovery journey, adds to the importance of this study. Gaining a deeper understanding of these issues will contribute to an increased awareness by health professionals who are caring for clients with major illnesses in rural communities and expand their ability to support clients appropriately during their recovery phase.

Following this literature review, Chapter 3 will explain the methodology and method underpinning this study.

CHAPTER 3: METHODOLOGY

3.1 Introduction

The diagnosis of cancer, the often lengthy treatment regime and, fortunately for more and more people, long term survival, are likely to be profound, even life-changing experiences for people living with cancer . The purpose of this study is to look at one part of this journey - the post acute cancer phase, with particular focus on what this means in relation to a person's sense of connectedness to the land. That is, how do rural people living with cancer describe their connection with the land, and how they feel this has impacted on their illness and recovery experiences?

This study deliberately focuses on rural people as a group likely to have distinct experiences and needs. McGrail et al (2005) explained that the planning of rural research requires special attention as the experiences of rural people often differ from that of their city counterparts and sound research will ensure continued improvement to the health of rural people.

For this doctoral research a qualitative approach has been chosen to explore the journey of recovering from a major illness for rural men and women who report a strong connection to the land. The main benefit of a qualitative approach is that the research focus is on the human experience and the phenomenon under investigation can be examined holistically as well as contextually (Schneider et al. 2003). This allows for the development of rich description of the phenomenon, which enables the researcher to gain a deep understanding of it. As the topic of this dissertation is largely unexplored within the literature, a qualitative approach permits the widest possible exploration, with a deliberately holistic approach to understanding illness experiences.

Considering the highly emotional nature of the topic and individuality of experiences, choosing the appropriate methodological underpinnings for the study was critical. Creswell (2009) suggested that researchers developing their research plan should consider and make explicit the philosophical underpinnings of their work. This should occur on three levels including identifying and defining the chosen methodology of the research, and describing how the chosen methodology has shaped the research (Creswell 2009). The philosophical underpinnings for this research sit within the constructivist paradigm. A significant factor in choosing to situate this work within the constructivist paradigm was that this approach acknowledged the researcher's own 'take' on the topic. That is, that the participants and the researcher had a common bond – their appreciation for the natural world – thus honouring from an epistemological perspective the interrelationship between the object of investigation and the investigator (Guba & Lincoln 1994).

The following chapter, then, discusses the philosophical and methodological underpinnings of this research and describes the decision-making process which evolved with the inquiry.

3.2 Which Research Approach?

Crotty (1998, p.2) explained that any researcher needs to ask the fundamental questions of 'what methodology and method they are going to use' and 'how to justify the choices'. Much of the justification of choice is in the first instance dependent on the research question and the nature of the inquiry but also on the theoretical perspective of the researcher (Crotty 1998). This view is shared by Grant and Giddins (2002), who argued that choosing the 'right' methodology for one's research strongly hinges on the type of problem or question the researcher is aiming to address and some approaches will be better than others to achieve this. Methodology is also strongly shaped by the study discipline. For example if it is scientifically driven or seeking to explore human experiences, this will influence the choice of research method (Creswell 2009; Lincoln & Guba 2003). It is also important to note that when choosing to conduct a quality human inquiry, one of the main motivating factors should not be the development of a theory or finding one ‘truth’, but the impetus should be the desire to engage with people and their unique life experiences (Reason 1993; Sandelowski 1986). This thinking particularly resonates with nursing as a discipline which centres on caring for people and being in touch with the human experience in relation to health and illness.

As mentioned in the introduction, the initial stages of developing the research design for this study involved extensive consideration whether to situate my research within a quantitative or qualitative research framework. On a broader level, quantitative research is concerned with testing theories via a rigorous scientific process, whereas qualitative research seeks to explore and understand human experiences via a variety of methods specific to this type of research (Creswell 2009). Initially, as a qualitative researcher with very limited previous involvement in quantitative research, I was interested in using quantitative methods as a way of broadening my research knowledge base.

Following liberal consideration of the topic though discussion with my supervisor, co-supervisor and other research colleagues as well as information from the literature, I decided that a qualitative research design would actually be the better choice to explore my largely unexplored topic. Although much of the research surrounding cancer is conducted within the scientific arena which, as Cooper Stevenson & Hale (1996) argued, is the most effective way of curing, treating and managing cancer, my early review of the literature revealed a real shortage of studies which centre around the knowledge and experience of people who are affected by cancer, instead of viewing them as passive ‘subjects’. Such studies have much to offer in ‘supporting’ rather than ‘managing’ cancer survivors. This view is shared by Wilson who asserts that, instead of viewing an individual as a ‘patient afflicted with various ills’, a traditional biomedical science approach regards people with disease as ‘cases’ who are ‘interesting only accidentally, to the extent that they exemplify some pathological entity that is interesting in itself’ (2000, p. 207).

Given that people, rather than bodies, get cancer, it is obvious that much of the experience of being diagnosed with cancer lies outside the actual disease process. A cancer experience is likely to have a substantial influence on all aspects of a person's life, including family, work, sexuality and psychological well-being. According to Creswell (1998, p.15) qualitative research is

> 'an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting'.

Relating Creswell's definition to my study, it was very important to me as a nurse researcher to build a holistic picture on how cancer survivors engage with their natural world. I felt this would ultimately help other health professionals to better understand their clients not only in the disease context, but also as individuals who are intrinsically linked to a physical, social, emotional, spiritual and natural world.

Once I decided to work within the qualitative research framework, the next step was where to situate my research theoretically and philosophically. Research terminology can be challenging for most people who do not come in contact with it on a regular basis, but as English is my second language, much work needed to be done to discover meaning behind some very impressive words! My initial findings were that many terms had multiple meanings, particularly when used within different disciplines. When attempting to define the word 'methodology', it soon became apparent that the terms method and methodology are often used interchangeably. According to Guba, the methodological question seeks to answer how the inquirer can find out what can be known about the inquiry (1994). This view is also reflected by Crotty (1998, p. 3) who described methodology as a 'strategy or plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to a desired outcome' and Grant & Giddings who viewed it as 'abstract theoretical assumptions and principles that underpin a particular research approach' (2002, p. 3).

The term ‘method’ on the other hand is described as a technique or use of tools for the collection and analysis of data (Grant & Giddings 2002). Acknowledging the difference in meaning, for this research the terms method and methodology are representative of two complementary, but separate components of research. A clear distinction between methodology and method has been made throughout this chapter to signify the separate but ultimately integrally linked processes.

In Kris Martin-McDonald’s view (2003, p. 45), methodology encompasses in a broader sense the ‘philosophy which grounds the research’ which in turn is embedded in the epistemological and ontological perspective. Grant and Giddings (2002, p. 12) defined ontology as the ‘most basic belief about what kind of being a human is and the nature of reality’, whereas Wilson described it as a study that relates to the ‘nature of being or essence’ (2000, p. 206). Epistemology on the other hand seeks to answer the ‘the relationship between the knower and what is known’ (Wilson 2000, p. 206). Considering the three fundamental ontological, epistemological and methodological questions within the research process, it becomes apparent that they are strongly interrelated and although much of the methodological approach is framed and constrained within the ontological and epistemological context, some researchers cross boundaries in order to broaden existing knowledge (Grant & Giddings 2002). This is also what I experienced when delving deeper into the philosophical underpinnings of the constructivist paradigm which will be discussed in the next section.

3.3 Constructivism

As an intellectual activity, Marshall described philosophy as ‘the most broad-ranging of the academic disciplines, since it addresses a wide range of interlinked questions about the nature of understanding, logic, language, and causality, many of which occur in the various sciences’ (1998, p. 493). The process of establishing an appropriate philosophical and theoretical basis for my study has been challenging, although in many ways it has raised my awareness on a broader level. I sought to link the complex and at times confusing discussions about research philosophy with my own views of the world - as a researcher with some background in qualitative research, as a nurse who has cared for people undergoing cancer treatment and also as a passionate rural dweller. Initial investigations into this relatively new area for me forced me to closely examine my personal world view and my engagement with the world.

As a researcher I was particularly interested in how to make sense of what I may find and how this would relate to other health professionals, cancer survivors and other interested parties. Another important aspect was gaining a more holistic view on cancer survivorship which considered the ‘interdependent whole’ of the survivorship journey. For this doctoral thesis, constructivism was chosen as the methodological framework. Following the consideration of a number of methodologies, I chose constructivism as it allowed me to fully engage with the participants as partners and not only as an observer. The following section will present a closer examination of constructivism and its relevance and application to this study.

3.3.1 Foundations of constructivism

A paradigm, or world view, situates the research within a particular framework that guides the researchers and their research approach. Paradigms are based around a set of ontological, epistemological and methodological assumptions which seek to answer central philosophical questions about the nature of knowledge. Discussion on what can be described as ‘reality’ or ‘meaning’ to the individual or a society as a whole is complex and well embedded in the various paradigms. For example, the positivist paradigm focuses on finding an ‘objective truth’ through the identification and gathering of data that are observable and measurable, and hence at times separate to the entire human experience (Heron & Reason 1997).

A great deal of philosophical debate within the research community revolves around the benefits and disadvantages of one paradigm over another (Creswell 1998; Denzin

& Lincoln 2003; Wilson 2000). More recently, paradigms such as the interpretative and poststructuralist paradigms have been proposed. These paradigms fit broadly within the original naturalistic paradigm, but have important differences and continue to be the subject of much discussion. The work of Denzin, Guba and Lincoln contrasts the scientific or positivistic (quantitative) paradigm versus the naturalistic (qualitative) paradigm. The naturalistic paradigm provides a framework to study things in their natural setting in an attempt to make sense and interpret phenomena in context of the meaning it brings to people (Denzin & Lincoln 2005). This resonated with my work.

Much can be gained from adopting a paradigm that considers a person's illness experience within a greater context and based on a shared understanding. Wilson (2000) in his discussion about the myth of objectivity in medical research and medicine's 300 year history within the positivist domain, posited that integration of a constructivist paradigm would serve well to improve patient outcomes. To gain a better understanding surrounding the philosophical discussion of objectivism and subjectivism in research and how this relates to today's health care delivery a table developed by Wilson (2000) is helpful. Wilson adapted the work of Maykut and Morehouse (1994) to demonstrate some of the fundamental differences between the positivist and constructivist paradigms.

Table 4: The Constructivist Paradigm versus Objectivism.

Questions	Postulates of objectivism	Postulates of subjectivism
1. How does the world work? (Ontology)	There is only one reality. By carefully dividing and studying its parts, the whole can be understood (Realism)	There are multiple realities, being socio-psychological constructions forming an interconnected whole (Nominalism)
2. What is the relationship between the knower and what is known? (Epistemology)	The knower can stand outside of what is to be known. True objectivity is possible (Positivism).	The knower and the known are inter-dependent.
3. What role do values play in understanding the world?	Values can be suspended in order to understand	Values mediate and shape what is understood.
4. Are causal linkages possible?	One event comes before another and can be said to cause that event	Events shape each other. There are multidirectional relationships.
5. What is the possibility of generalisation?	Explanations from one time and place can be generalised to other time and places.	Only tentative explanations for one time and place are possible.
6. Human nature	Determinism	Voluntarism
7. Methodology	Nomothetic (search for universal law)	Idiographic (concerned with the individual, descriptive of single and unique facts and processes).
8. Preferred research method	Quantitative research	Qualitative research

(Wilson 2000, p. 205)

A practical example which demonstrates some of the fundamental differences within the different world view health professional and patients may hold is provided by Wilson (2000). He illustrates a doctor-–patient conversation where the patient says to the doctor when discussing the option of having a mastectomy: “I think I know why I am ill”. Reply by the doctor: “Well, that doesn’t make any difference to the way we treat you” (Wilson 2000, p. 203). This example shows a level of dialogue and mutual (mis)understanding nurses can well identify with, but this not only occurs within the medical paradigm but many of the ‘professional’ versus ‘lay-person’ interactions. It is important, as a nurse, to draw on the core values of understanding and compassion to understand the experience of the individual within their reality and view of their illness even though it may differ from one’s own reality. Nursing research such as this study will provide new and interesting perspectives on cancer survivorship, which may lead to newly constructed knowledge for health professionals.

As previously noted, a qualitative approach embedded in a methodology which focuses on capturing the human experience and acknowledging the participant – researcher connection, was an important basis for this study. For the relatively novice qualitative researcher, identifying a research paradigm can prove challenging when a given research topic does not fit ‘neatly’ with a set of paradigmatic assumptions, as is the case with this study. I wondered, for example, how to integrate the ‘human-natural world’ focus, into a traditional social science based, ‘human-human’ interaction focused world view. The constructivist paradigm ‘fits’ with the majority of these requirements, however, alternative expanded views of the constructivist perspective had to be included to capture the interconnectedness between humans and the natural world.

The process of gaining a broad picture of constructivist methodology has been challenging and at times confusing. A multitude of similar terms such as constructivism, radical constructivism, and social constructionism are used seemingly interchangeably and the inconsistent use of constructivist methodology across a variety of disciplines such as nursing, psychology, pedagogy and sociology did not make this quest any easier. Additionally, since the early developmental stages of the constructivist perspective, different approaches have developed and according to Schwandt (1997), there are two major theoretical strands. One is known as radical constructivism, which centres on the individual and acts of cognition. The other, social constructionism, is more focused on social processes and interaction (Schwandt 1997). This inquiry is positioned within the social construction of meaning, which Crotty describes as ‘ all knowledge, and therefore all meaningful reality as such, contingent upon human practices, constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context’ (1998, p. 42). Although acknowledging the importance of the different approaches and their usefulness within various disciplines, the work of Lincoln and Guba will form the philosophical platform for this study, hence my choice to adopt the terms constructivist and constructivism as used by them.

According to Crotty (1998), some of the fundamental assumptions of constructivism include that humans create meaning through engagement with their world within a social and historical context. Within a qualitative inquiry, meaning is also jointly constructed between the researcher and the participant, thus acknowledging the influence of the researcher on his/her work (Crotty 1998). Guba (1990, p. 183) explains that a constructivist approach is ‘very different from that of the conventional inquirer’. The latter is linear and closed. By contrast the former is iterative, interactive, hermeneutic, at times intuitive, and most certainly open’. These processes of wholly engaging participants and researchers in the construction of knowledge through a hermeneutic and dialectic process, aims to transform the ‘mind’ not the ‘real’ world’ (Guba 1990). ‘Constructivism thus intends neither to predict and control the ‘real’ world nor to transform it, but to *reconstruct* the ‘world’ at the only point at which it exists: in the mind of the constructors’ (Guba 1990, p. 27).

To gain a clearer picture of the key principles as outlined in Guba and Lincoln's work (1994), the following table consolidates the ontological, epistemological and methodological assumption of the constructivist paradigm.

Table 5: Ontological, Epistemological and Methodological assumptions of the Constructivist paradigm

Ontology Nature of reality, what can be known?	**Epistemology** Nature of the relationship between researcher and what can be known?	**Methodology** How to gather knowledge, answer the research question?
• Multiple realities which are a product of the human intellect. • Realities may change as their constructor becomes more informed. • Socially and experimental based. • Relativism - local and specific in nature, although elements shared among individuals/cultures. • Form and content of reality is dependent on individual/group holding the construction. • Constructions can be more or less informed or sophisticated, not more or less true. • Constructions and associated realities can be altered.	• Transactional and subjectivist. • Investigator and object of investigation interactively linked, findings are literally 'created'. • Conventional distinction between epistemology and ontology disappears.	• Constructivist methodology aims to reconstruct previously held constructions through hermeneutical and dialectical processes. • Individual constructions are refined through interaction between investigator and respondents.

(Guba & Lincoln 1994, p. 108-112)

Grbich (1999) remarked that one criticism of a paradigm based approach is that it appears to oversimplify the research process when compared to the scientific paradigm. Lincoln and Guba (1989) have developed their argument strongly opposing this view and demonstrating the value in positioning research within the constructivist paradigm. In fact Guba and Lincoln warned researchers contemplating the constructivist approach that the researcher needs to be mindful as:

> ‘far from being the “easy way out” that “undisciplined, lazy, ignorant, or incompetent” inquirers might choose, in contrast to the more rigorous, disciplined, and demanding conventional approach, it makes demands of its own so heavy that anxiety and fatigue are the constructivist’s most constant companions. It is a different path, one path strewn with boulders, but one that leads to an extravagant and hitherto virtually unappreciated rose garden (1989, p.183)

My experience in using this approach aligns with Guba and Lincoln’s view, in that is it has been a thoughtful, though provoking and challenging methodology for this study. However, it is not always possible to strictly follow a methodological foundation and one challenging question on how to appropriately engage with participants in a joint construction of understanding, whilst at the same time minimising the ‘imposition’ on participants, given their health status, had no easy answers.

Despite its many challenges, the strength of constructivism is its recognition of the undeniable influence the researcher has on his/her research, thus allowing for an open and transparent research process. According to Guba and Lincoln ‘the conventional distinction between ontology and epistemology disappears’ as ‘the investigator and the object of investigation are assumed to be interactively linked so that the ‘findings’ are literally created as the investigation proceeds’ (1994, p. 111). The following section discusses the position of this research/er within the ontological and epistemological considerations of the constructivist paradigm.

3.3.2 Ontological and epistemological considerations

Research within the constructivist paradigm focuses on the construction of a social reality by the individual (Grbich 1999). The term ‘constructivist’ also acknowledges that within a research process, understanding of the topic is jointly ‘constructed’ between the researcher and participants. Lincoln and Guba have extensively discussed their perspective on what constitutes ‘meaning’ and ‘reality’ for an individual or group and how they are created. From a constructivist perspective, reality or meaning are not absolute or static, but created though meaning making activities that shape action (or inaction) and can be changed when found to be either incomplete, faulty or malformed (Lincoln & Guba 2003). The researcher's contribution to the development of this understanding or 'meaning making' needs also be clearly recognised and acknowledged, as it begins with selection of the topic and continues its influence through data collection, analysis and interpretation (Grbich 1999). Following is a reflection on my personal view and knowledge about my chosen research topic which shaped much of initial idea generation and resulting study design.

3.3.3 My connection to the land

Reason noted that 'a qualitative inquiry will be rooted in the love for oneself and for the world in which and with which one inquires' (1993, p. 278) and Lincoln (1991) described the inquirer's voice within the inquiry as that of a 'passionate participant'. This certainly holds true in my case. Growing up in the lush German countryside, surrounded by forests, lakes and fields is my fondest childhood memory. Endless hours in the forests in the company of my Dachshund, observing deer, foxes and birds, was a world that I felt most comfortable in. It was not something I had learned or observed from my parents or friends, it was something innate, a feeling of wanting to know everything that nature had to offer. Moving to Australia in my twenties gave me even more opportunities to continue my passion for the land and live in an environment that provides freedom of space, solitude and beauty.

Throughout my nursing career I have been very fortunate to talk to many people from rural and remote communities, listening to their stories and understanding the uniqueness of their situation. Being a rural dweller myself, it does not go unnoticed how quickly one becomes accustomed to the freedom of space and the positive feeling one gets from fresh air, sunshine and the 'sounds of silence', much of which is denied to people who enter the hospital system particularly for longer periods of time. During my clinical work in the geriatric rehabilitation area I saw many people having prolonged stays in a ward that is very isolated from the natural world, providing artificial light, air-conditioning and relatively bare walls. Some patients would not see sunlight for many months and I used to ask myself how I would be able to cope with this? Perhaps this situation is made worse by the changes in design of hospital buildings. Australian hospital buildings used to be characterised by their wide verandas where patients could spend some time outside, but nowadays hospital buildings tend to be ‘concrete jungles’ with little focus on indoor/outdoor interactivity. Many of these questions will not be answered within this research topic but it is hoped that the view of the participants on the role their connectedness to the land had on their individual recovery, may assist in developing more thoughtful hospital designs.

As outlined, my personal experience and passion for the land has influenced my choice of topic in the first instance and brought with it my personal construction about human existence and interaction with the natural world. However, my connection to the land was not something I had spent much time thinking about, it was just part of my daily existence. To bring my reality of the topic more into my conscious mind, my supervisor suggested interviewing me to express my feelings of being connected to the land. The interview was done in the early study phase and it enabled me to gain greater clarity about my own thoughts and feelings on the topic. Listening to my interview in the later stages of my study assisted me to identify my biases, identified where the participants’ and my own constructs were similar or dissimilar and ensured that my own voice was acknowledged, but did not become louder than that of the participants.

3.3.4 My understanding of cancer survivorship

So how does one integrate one’s love of the natural world in the field of nursing which is strongly dominated by technology, human-human interaction and artificial environments? As discussed in the introduction chapter, primarily my background as a nurse and a researcher shaped my understanding of cancer survivorship. But these were not the only sources as more insight was also gleaned from my supervisor’s PhD thesis on rural women who had survived breast cancer (Rogers-Clark, 2002).

Several of the women in her study talked about their love for the land and how it made them more resilient. This information and my involvement in other rural health studies also gave me some glimpses of how rural people felt about their environment and how it influenced them, thus igniting my interest in exploring these concepts further.

When analysing one’s own knowledge on the topic of cancer survivorship in relation to being connected to the land, most of my personal construct was shaped by what I have observed and learned over the years from family, friends, patients and participants from my previous involvement in cancer research projects. I discovered that cancer survivorship has multiple realities, challenging the generally held view that being diagnosed with cancer is a ‘death sentence’. I had the opportunity to observe cancer survivors who were leading happy and fulfilling lives and not being limited by the knowledge of their diagnosis. As a researcher, I was aware that statistically survival rates for many types of cancer are improving, but as shown in the literature review, the predominant focus is on the early stages post cancer treatment and little is known how people with cancer deal with survivorship long term. An initial literature search also shed very little light on the issue and identified a lack of knowledge within the health literature which gave further impetus on wanting to find out more about issues surrounding long term cancer survivorship. Hence the combination of my own pre-existing knowledge and the desire to gain a greater understanding on the topic of connection to land and cancer survivorship, framed the development of this research.

3.3.5 Constructivism, meaning making and health care

According to Mills, Bonner and Francis (2006), people’s view of the world and the meaning of truth is shaped by their historical and cultural context, and is often unconscious and taken for granted’ (2006, p. 2). Similarities can be found when patients and health professionals have a differing and often idiosyncratic view of the cause of their illness, which in turn may impact their journey to recovery (Wilson 2000).

Wilson described that a constructivist perspective allows an analysis of the complex interactions between patients and health professionals, as behavioural outcomes are constructed between the parties and ‘patients are accorded *sick* status according to social conventions unique to each sub culture’ (2000, p. 207). Much of the patient’s recovery from their illness will be dependent on a number of issues such as individual beliefs and cultural support systems, biological factors and the relationship between the doctor and his/her patient (Wilson 2000). This list, I suggest, is not exhaustive. In this study, the focus on human/environment connection identifies a far broader approach to understanding human existence, recognising that our natural heritage is being part of a complex natural world in which humans are only one part. This thinking aligns with Reason, who argued that the human-centric Western world view has reached its usefulness and new thinking and approaches are needed to what he calls ‘the epistemological crisis of the West’ (1993, p. 274).

Much of Reason’s argument is based on the work of Berman, who portrayed a worldview which preceded the Renaissance, elements of which are congruent with the new thinking which Reason believes is needed. According to Berman, nature was once seen as a wondrous and integral part of human existence; however the influences of the scientific revolution have altered this sense of connection and belonging, changing the relationship from that of a direct participant to an ‘alienated observer’ (1981, p. 16). A broader, more holistic focus on understanding human illness experiences must, of necessity, recognise the human/environment connection. As the main focus of this study is on rural people’s connection with the land, it is likely that much of the reality of everyday life for this participant group will derive from their interaction within their rural environment. Living in a rural setting compared to urbanised living differs not only from a social and economical perspective, but from an environmental perspective as well. This is an aspect that until now has been paid little attention to in relation to health and illness.

This thinking strongly aligns with Reason’s (1993) critique that much of today’s research has moved away from connecting humans to their natural world and, particularly in the scientific realm, humans are seen as separate and alienated from their environment. What was once seen as sacred to our world and the human experience within it has made way to a ‘secular and disenchanted world’ (Reason 1993, p. 273). This notion is echoed by Heron and Reason who asserted that the Western world view has ‘left us with a legacy of human alienation and ecological devastation’ and there is a need to realign our view as co-inhabitants of the planet (Heron & Reason 1997, p.290). Healing this alienation, or to make ‘whole’ is what Reason (1993) considers to be central to the purpose of human inquiry.

Relating Reason’s and Herron’s concerns to today’s health care industry, much of this resonates. There are very well established critiques of the predominant medical scientific model, which highlight that the model has a limited view of disease as a malfunction within one’s body or mind, independent of each other (White 1996). However, the model persists as the dominant approach to health care. Cancer care provides a very good example of this predominance. Treatment of cancer focuses on treating, removing or eradicating a specific tumour that is situated within a specific body part. Once treatment concludes, people are scheduled for regular follow up visits, given brochures or linked with cancer support services. Much of this is patient driven and strongly linked to actually having access to such services (Hegney 2002). However, it is worth exploring how cancer survivors cope long term in a rural environment that, by its nature, is likely to isolate rural dwellers from health and supportive services by virtue of distance, but on the other hand could be healing in terms of maximising the human/environment connection.

3.3.6 Limitations and challenges of the constructivist paradigm

As researchers continue to test the boundaries of any methodological approach within their discipline, some limitations may become apparent. Much of the constructivist approach is embedded and utilised in pedagogy with particular focus on how evaluation of knowledge should occur, however within the health arena, some of the concepts are difficult to apply. Tina Koch (2000), a nurse involved in a study involving elderly patients in a acute care hospital, discussed her experience using Guba and Lincoln's 'Fourth Generation Evaluation' principles in a number of settings and different participant group. A particular emphasis of the principles of fourth generation evaluation is on the role of stakeholders and the negotiation process, which strives to give participants a 'voice' through hermeneutic and dialectical processes (1989). Some findings of Koch's work showed limitations in using this evaluative approach due to privacy, environmental and time constraint issues (2000), all of which were also identified in this study.

In an ideal world, closer involvement with the participants during the interpretive phase would have been ideal, however for a number of reasons this did not occur. For one, the distance of the rural participants was a barrier for me to see them on multiple occasions, as well as organising an opportunity for participants to come together as a group. As many of the participants were still working on their farms, time constraints were also an issue. From an ethical perspective, some of the participants felt very strongly about maintaining their confidentiality and any conversation outside their chosen circle would not have been an option. This has been acknowledged by Guba and Lincoln who acknowledged that issues of confidentiality and anonymity can cause special and 'sticky' problems (1994, p. 115). Additionally, it is important not to forget that this participant group, even though being cancer survivors up to the stage of the initial interview, were at varying stages of their illness and repeated conversations may have proven to be difficult. In fact one issue raised by the ethics committee was that prolonged interviews may be too demanding for some participants and I was very mindful for this not to occur. In order to capture the participants' 'reality' and refine our mutual understanding, questioning and summarising techniques were used during the interview and follow up phone calls. This was not without its limitations as for some participants discussing their experience with cancer was confronting as it brought back long held memories and emotions, hence asking participants for involvement beyond the interview and transcript reading process, would have been ethically inappropriate and may have reduced the number of participants in the study.

Another limitation of the constructivist approach within this research centres on the integration of the natural environment within the human construct. Eileen Crist (2004) argued that the constructivist view 'explicitly relies on a humanistic perspective about knowledge creation that privileges the cognitive sovereignty of human subject over nature' and that 'constructivists existentially divorce the human perspective from the natural world and describe meaning making as acts of delegation emerging out of alliances, competition, negotiations, networks, rhetoric, or techniques of human arenas. This is a valid critique and this issue created a significant level of uncertainty for me in relation to my decision to situate my study in the constructivist paradigm. I see myself as *one* with the natural world, however Crist asserted that meaning creation of the natural world from a constructivist view presumes that humans are separate and essentially a 'one-way affair from human arenas to the natural world' (2004, p.8).

In relation to my research, how does one consider and make sense of this critique when my work strongly centres on the human-natural world interaction within a constructivist paradigm, particularly in view of standard definitions describing the 'generation of meaning' as *socially* constructed through interaction within the human community (Crotty 1998). However, Crotty presented an interesting illustration which offers some clarification regarding the human-natural world construction of meaning. He said:

> Accepting that the world we experience, prior to our experience of it, is without meaning does not come easy. What the 'commonsense' view commends us to do is that the tree standing before us is a tree. It has all the meaning we ascribe to a tree. It would be a tree, with the same meaning, whether anyone knew of its existence or not. We need to remind ourselves here that it is human beings who have construed it as a tree, given it a name, and attributed to it the associations we make with trees. It may help if we recall the extent to which those associations differ even within the same overall culture. 'Tree' is likely to bear quite different connotations in a logging

> town, an artists' settlement and a treeless slum. What constructionism claims is that meanings are constructed by human beings as they engage with the world they are interpreting (Crotty 1998, p.43)

Hence, a constructivist approach, with its openness to convergent and divergent thinking and acceptance that there is no single explanation for complex phenomena (Appleton 1997), recognises the multiplicity of meaning inherent in how people conceptualise and relate to their natural world. The resulting meaning making is likely to be, in part at least, derived through human interaction with the natural world. The participants in this study were asked to share their 'construction' of their natural world and it is *their* reality which is reported, shaped by their experience, associations and interaction with their natural environment.

In conclusion, Guba and Lincoln (1994, p.113) explained that the main focus of constructivism is 'understanding and reconstruction of the constructions that people (including the inquirer) initially hold' and this has certainly been a major aspect of this thesis. In view that much of the research surrounding cancer occurs in the biomedical domain, it is of importance to examine this closer and how 're-construction' of previously held ideas may provide better insights into the complexity of cancer survivorship. Ultimately the issue here is not on finding 'truth' in an absolute sense, but to acknowledge that within the constructivist paradigm, constructions held by individuals or communities are 'more or less informed and/or sophisticated'. However, these constructions can change over time (Guba & Lincoln 1994) and what we know about cancer survivorship today may well change in the future as more knowledge and understanding comes to light.

The following chapter 4 will now focus on the 'practical' component of my work, outlining the research design and methods, ethical considerations, participant selection and data collection, as well as data analysis.

CHAPTER 4: DESIGN AND METHODS

Planning, implementing and evaluating this research study has required considerations and reflections on many fronts, all of which have helped me grow as a researcher. For this study, a qualitative, collective case study design was chosen as the most appropriate method to answer the posed research questions. The following chapter discusses the research design and methods employed in this study from the initial development of the research plan, to the recruitment of the participants, data collection and finally the data analysis. This chapter also discusses the quality of the research and important ethical issues.

According to Grbich (1999), a researcher needs to match a method to the research question or questions, which in this study meant choosing a field-based approach that allowed the phenomenon to be explored via interviews and observational techniques. Denzin and Lincoln (2003) further explained that the study design anchors paradigms within specific methodological practices and a case study design is a suitable strategy of inquiry within the constructivist paradigm, which is why a case study design was chosen for this study. A case study design can include an individual, group or institution and provides opportunity to understand comprehensively the area under investigation (Taylor 2002). Within a case study approach, multiple methods are used to obtain data and these may include interviews, field notes, observations, documentary methods or recording of audio or visual data (Bloor & Wood 2006). In this inquiry a number of case studies, namely the experiences of all participants who agreed to take part in the study, form the interpretive basis for this research. Hence this inquiry can be described as a collective case study (Creswell 1998).

Case studies are a tool widely used in the field of psychology, sociology, anthropology, health, education, economics and political science (Grbich 1999). Yin (2003) explained that there are three types of case studies, including explanatory, exploratory and descriptive, and that case studies are particularly useful when ‘why’ and ‘how’ questions are to be answered. With the focus of this study exploring a relatively unknown concept of being connected to the land, particularly in relationship to cancer survivorship, an explorative case study provided the most suitable design choice.

Discussion exists regarding the transferability of case study data to larger populations. The notion that the depth of data may be decreased when a large number of cases are studied may be offset by the ability to produce conclusions that can be more broadly applied (Bloor & Wood 2006). Schratz and Walker (1995) asserted that some case study reports contain large blocks of transcript data, but do not show good level of understanding of the problem or demonstrate meaning making that could lead to the theorising. The aim of this study is to gain a greater understanding of the topic at hand from an individual perspective, not to develop scientific generalisations. Nonetheless in this study, 17 participants took part and provided a large amount of data, which has provided the opportunity to look for similarities and differences across all case studies within the thematic analysis. The results of this study are likely to have transferability, which refers to the degree to which the analysis can be applied to other people, other times and different settings (Taylor, Gibbs & Lewins 2005).

4.1 Recruitment and Selection

Initial consideration occurred on what the selection criteria should be with the inclusion of ethical and practical considerations. The final participant selection criteria decided upon included men and women who lived in a rural setting, reported a strong sense of connection to the land, had a diagnosis of cancer and had completed their acute treatment phase. The reason for selecting this participant group was to gain an insight into the cancer experience, especially in relation to people’s rurality, and including both male and female perspectives, irrespective of cancer type. Not specifying a particular type of cancer provided opportunity to capture a larger pool of participants and increased the potential for transferability of the results. This is supported by evidence to suggest that people with different types of cancer have similar experiences, particularly in the psychosocial domain (National Breast Cancer Centre and National Cancer Control Initiative 2003).

Due to the explorative nature of this research, no explanation or definition of ‘connection to the land’ was given to the participants in the recruitment phase, as one of the two research questions required participants to describe their perception of ‘being connected to the land’. This exploratory approach is appropriate because, to date, there is no definitive description of ‘being connected to the land’ within the literature for non-Indigenous peoples. Providing any kind of description or explanation prior to the interviews may have biased and possibly narrowed the understandings and experiences shared by participants.

In order to meet these requirements, the following inclusion and exclusion criteria were selected:

Inclusion Criteria

- Men or women living in a rural area in Queensland, who
    - were over 18 years of age,
    - had lived with a major cancer diagnosis for at least 12 months,
    - reported a strong connection to the land and
    - indicated their willingness to take part in one or more in-depth interviews.

Exclusion Criteria

- Men and women, who
    - did not speak English proficiently,
    - suffered from cognitive impairment,
    - were in an active treatment phase for their cancer and
    - were in a terminal (end-stage) phase of their cancer journey.

The focus of the participant recruitment process was to attract around ten participants and to aim for representativeness by attempting to recruit relatively equal numbers of male and female participants, participants in a range of age groups and socio-cultural backgrounds, and who lived in a variety of rural areas in Queensland. As participants were not randomly selected, one can expect some selection bias using such a recruitment method; however within this study a self-selection recruitment method was entirely appropriate and indeed was the only possible choice. Given the nature of this study, random selection would not have been possible. No men or women who responded to the call for participants were excluded from this study due to not meeting the exclusion criteria.

Promoting the study in the rural areas of Queensland was a key step in the recruitment process. A media release was formulated and published on the University of Southern Queensland website (Appendix A), and was sent via fax-stream to media outlets in South East and South West Queensland. This media release was taken up by a number of rural newspapers. Additionally, I was asked to take part in two ABC radio interviews in different Queensland regions.

As well, informal channels were used to seek participants. One of these channels was via members of two rural cancer support groups who agreed to take the information/ consent forms to their meetings and hand out to interested parties. At my place of work at the Toowoomba Health Services, the media team also agreed to publish my study in the monthly staff newsletter. Furthermore many colleagues and friends were aware of my study and were very supportive in attracting potential participants. Interestingly, these channels did not actually lead to any participant recruitment.

By far the most successful recruitment method was the call for participants via the media release which led to stories in rural newspapers and the radio interviews. The exposure resulted in 20 telephone calls. It had initially envisaged that the snowball technique may be useful, which is a valid technique used by researchers and involves asking participants who have already consented to take part in the study if they could identify other suitable participants (Taylor 2002). However, only one participant was recruited this way and although some participants thought they knew someone who might be interested, nothing further eventuated. Admittedly due to the high number of callers and agreeable participants there was no need for me to pursue the search for more participants further.

Potential participants phoned me after hearing or reading about my study in the media, and during our conversation I thanked them for their interest, and outlined the study to them. Following the initial contact, those who were interested in taking part in the study were sent the Plain Language and Consent Form (Appendix B) to provide all the necessary information about the study, and what being included as a participant would involve. A reply-paid envelope was enclosed so potential participants could return the consent forms at no cost to them or alternatively these were provided prior to the interview taking place. Once the potential participants had returned their consent form, I phoned them again to arrange for an interview. During this call I was also able to collect some demographic information (sex, age, type of cancer, time since cancer diagnosis), which I added to my notes I had taken during the first phone call. This was helpful during the formal interview, as I already had a picture of the participant’s situation and this served as a good lead-in to our conversation.

4.1.1 The participants

In total I received 20 phone calls from interested men and women. Seventeen respondents agreed to take part in the study and three chose not to. Their reasons not to be involved were varied. One person was going to talk on behalf of her deceased husband who had cancer but she decided that her reasons for wanting to talk to me were not congruent with the aim of the research. One male caller wanted to talk about a ‘natural’ remedy he had found to fight cancer and he was wondering if I could assist him in marketing his discovery but after some discussion he concluded that this research was not the right forum for this. Another lady just wanted to talk about cancer in relation to pesticides but decided not to go ahead.

Of the 17 participants, there were nine male and eight female participants, who were aged between 24 and 80. The total participant group included two couples where both partners had a cancer diagnosis. The following table presents a summary of the ages of participants.

Table 6: Age of participants.

Age group	*Number of participants*	*Male*	*Female*
18 – 40	1	0	1
41 – 60	6	2	4
61 – 80	10	7	3

The range of post-cancer diagnosis time varied from 12 months to 40 years and all participants had completed their active treatment phase. Seven of the 17 participants had experienced recurrent episodes of cancer since their initial diagnosis. Table 2 describes the primary cancer diagnosis of the participants:

Table 7: Types of Cancer Diagnoses of Participants

Type of Cancer	*Number of participants*
Breast Cancer	3
Prostate Cancer	2
Leukaemia	2
Bowel Cancer	2
Rectal Cancer	1
Pancreatic Cancer	1
Osteosarcoma	1
Melanoma	2
Endometrial Cancer	1
Cervical Cancer	1
Testicular Cancer	1

The exclusion criterion relating to participants not being in their terminal phase of their cancer journey was primarily intended to protect potential participants who were undergoing palliative care. It was felt that taking part in this study was too burdensome for those at this stage of their illness. However, once participants contacted me and wanted to take part in the study, I found it was not appropriate to ask them if they were at the end stage of their cancer journey. Faithfull (1994) explained that for many people with cancer, cure is not only the absence of disease but also resuming life as it was prior to the cancer diagnosis. Talking to the participants made me aware that each had varying perspectives on where they were situated along the survivorship continuum, which ranged from believing they were completely free of cancer, to knowing that they would ultimately die from it. I realised that it was ultimately the individual's choice to contact me and take part in the study, and exactly where they were along the survivorship continuum was somewhat irrelevant to the aims of this study.

One example is that of a participant who suffered from pancreatic cancer. When he returned the consent form he also enclosed a handwritten note, stating *"I know it is too late to be of any benefit to me, but it may help some unfortunate person 10, 20 years down the track. I have my own theories regarding my problem, which I will only be too happy to discuss"*. His passion for the land and his deep connection was immediately apparent during the interview. Unfortunately the participant died within three months of taking part in the interview, but sharing his ideas and knowledge has given him a voice beyond his death – just as he intended.

4.1.2 Participants' location

Sixteen of the participants lived in various parts of Queensland, with one participant living just across the Queensland border in New South Wales. Seven participants were living on their rural property, while the other nine had either retired or moved off their property, but lived in townships close to their original farm or in other rural locations. One participant was a student who usually resides on the parental property. In order to classify the remoteness of each of the participants, the Rural, Remote and Metropolitan Areas (RRMA) classification was chosen. The RRMA (Australian Institute of Health and Welfare 2004) uses an index of remoteness and measures straight line distance from the centre of statistical local area to the centre of the next urban location, as well as population densities. RRMA's 'index of remoteness' is based on distance to service centres as well as a measure of distance from other people (Australian Institute of Health and Welfare 2004). The following figure shows the structure of the RRMA classification:

Table 8: Rural, Remote and Metropolitan Areas (RRMA) classification.

Zone	***Class***	***Abbreviation***
Metropolitan Zone	Capital Cities	M1
	Other Metropolitan Centres (urban centre population > or = 100, 000)	M2
	Large Rural Centres (urban centre population 25,000 – 99,999)	R1
Rural Zone	Small Rural Centres (urban population 10,000 – 24,999)	R2
	Other Rural Areas (urban centre population <10,000)	R3
Remote Zone	Remote Centres (urban centre population > or = 5,000)	Rem1
	Other Remote Areas (urban centre population <5,000)	Rem2

Department of Primary Industries and Energy & Department of Human 1994, in Australian Institute of Health and Welfare 2004)

The Rural, Remote and Metropolitan Areas Classification provides extensive tables which lists Australian locations and their corresponding classification. According to this, the following table shows the area classification of the 17 participants in this study:

Table 9: Location of participants by RRMA classification

RRMA Classification	*Number of participants*
R1 Large Rural Centre	4
R2 Small Rural Centre	2
R3 Other Rural Areas	8
Rem 2 Other Remote Areas	3

All participants had either lived their entire lives or a substantial part of their lives on the land. All participants had either grown up on the land and/or currently owned or had owned a property in the past. One of the participants had been employed doing farm work for many years. Every participant reported a strong connection to the land.

4.2 Data Collection

Data collection is undoubtedly one of the high points in the research process and much planning occurred to ensure that this was undertaken in a professional and accurate manner. Preparations before and after the data collection phase, such as ensuring that the digital recording equipment was functional and re-testing that the interview recording occurred afterwards was important and ensured that the participant's time was not wasted. It was also important to me to present myself in a manner that would foster ease of communication and hence I chose clothing that was neat yet casual. Managing the data collection process required some good organisation and the following section describes the data collection methods.

4.2.1 The interview process

Dates, times and locations were chosen to suit the participants. Given the study objectives, it was desirable for the interviews to take part in the participants' homes to gain a picture of their setting. Unfortunately this could not be achieved with all participants and of the 17 interviews, 11 were conducted in the participant's home, five in alternative locations and one over the telephone. One participant lived at a distance which would have required lengthy travel arrangements and in discussion with the participant it was agreed that a telephone interview was a suitable option. The other five participants chose other locations mainly for convenience or they preferred another location than their home. Two participants had arrangements made for travel to Toowoomba for various reasons and interviews were conducted during those times. One participant studied in Toowoomba and one participant came to his friend's place who also took part in the study, and another invited me to his partner's place as his place was further out of town and difficult to find. The country hospitality of many of the participants and their partners deserves a special mention, with most visits including morning teas and lunches which I greatly appreciated especially after lengthy travel.

According to Guba and Lincoln (1981), the quality of the interview data is highly dependent on the skills and expertise of the interviewer. Having had extensive experience in conducting face to face interviews, as well as formal and informal training on best ways to conduct interviews, I was aware of the importance of building a good and genuine rapport with the participants in order to make them feel comfortable about the process. It has also been my experience that people have a level of trust in nurses and easily share their thoughts and feelings.

Upon arrival general conversation about the participant's place of residence, their farming set up or any other day to day issues was held. This gave everyone the opportunity to relax and have a 'get to know you' period. Many participants either before or after the interview also took the opportunity to show me around their place, giving me a good sense of their physical setting, something I was keen to experience. One participant was an avid collector of farm machinery and I spent quite some time learning the history about each tractor and truck. Time limits of no longer than two hours were set as I was aware of participant's time and work constraints and all interviews were kept within these limits. Participants had the option to undertake the interviews over several sessions, but additional interview times were not required as all participants felt they had exhausted the topic during the first interview.

Participants were reminded that they could add further information following the member checking of the transcript.

Holstein and Gubrium (2003) proposed that in the 21st century, interviewing has become one of the most commonly used method for collecting information about the social world. Interviewing varies from structured, to free flowing conversations, with the focus on obtaining answers to set questions (Holstein & Gubrium 2003). For this study, all participants were asked to take part in an in-depth, semi-structured interview. Prior to the interview taking place everyone was provided with two open ended interview questions to give them the opportunity to think about their answers. This was welcomed by all participants as it made them feel more in control of the interview and reduced the anxiety about what they were going to be asked. The questions posed were:

1. What does it mean to you to feel connected to the land?
2. Can you describe your journey of cancer survivorship in relation to being connected to the land?

According to Morse (2002), a way to achieve a deep understanding of the experiences of the participants is through listening, observing, reflecting and asking questions. Open ended questions provide the opportunity for free expression without restraints as interjections are kept to a minimum. Throughout the interview I ensured active listening was demonstrated to the participants through eye contact and body language, ensuring I kept interruptions to a minimum. Considering the importance of the dialectic approach within the constructivist paradigm, when further clarification was needed or more depth required, I asked probing questions to allow deeper exploration of certain issues. In Appleton's view, this is the best time to seek clarification and resolve any ambiguity (1997). It was also important to explore similar or alternative views among participants by sharing some of the comments made by previous participants (without revealing their identity) and finding out if other participants shared these or had different experiences. One example is the issue surrounding pesticide use and how some participants felt it had contributed to their cancer diagnosis. Some participants agreed with this notion very strongly whereas others were unsure about this issue.

In keeping with the constructivist approach for this study, interviewing participants was seen as a ‘social encounter in which knowledge is constructed’ and is ‘more than a simple information-gathering operation; it’s a site of, and an occasion for, producing knowledge itself’ (Holstein & Gubrium 2003, p. 4). During the initial telephone contact, many of the participants provided me with important background information about their cancer experience. It was also a good opportunity for them to ask me questions that helped them to ascertain if they were going to be comfortable speaking with me and ultimately take part in the study. Judging by the great response, participants must have felt at ease talking to me, sensing a common ground for our discussion.

One very important aspect emerging from the actual interview process was that I gained great insight into the mutual construction of the participants’ views and my own. Visiting the participants’ homes and getting a feel for their environment along with sharing similar interests and passions, paved the way for a rich and interesting dialogue. As participants were telling their stories, I could identify with what they were saying, but also gained new and interesting insights. Even though I never had to face what it means to live with cancer, I could empathise with their situation. Several participants enquired about my German background and collaborated with stories about their European heritage. The interviewing process all in all was a very enriching experience and having taped the interviews, I was able to listen to them multiple times, giving me the opportunity to reflect on our conversations at a deeper level.

4.2.2 Member checking

Roberts and Taylor (2002) described member checking as a tool to ensure the trustworthiness of the data, by ensuring that participants validate the information provided. Within the constructivist approach, member checking is essential to gain verification and to provide opportunity for participants to reflect on their contribution to the research (Lincoln & Guba 1985). Following the verbatim transcription of the data, all transcripts were checked by listening to the recorded interviews and comparing them to the transcripts. Once I was satisfied that the transcripts were a faithful written record of the original interview, the transcripts were posted to all participants. A letter (Appendix C) accompanying the transcript was also sent, asking participants to check the transcript for accuracy and make any required changes. I informed participants that I would contact them in a couple of weeks to discuss the transcript and I took the opportunity to thank them again for their time and commitment to the study. I was unable to obtain the telephone number of one participant, but I wrote a note stating that if he had any concerns to please contact me, which he did not do, indicating that he had no concerns with the information.

I spoke to every one of the 16 participants, except the participant I discussed previously, and all of them were happy with the contents of their transcripts and did not feel they needed any major changes. Some discussion occurred around what the participants felt was the primary message they wanted to get out to others and how important this was for them. Two participants took the opportunity to expand on their information by sending additional notes. Interestingly many participants commented how they found the whole process of taking part in the study very helpful and gave them further insight into their own situation. This reported outcome is confirmed by Wiltshire (1995) who found that encouraging people to give an account of their experience not only provides rich data, but has also been found to have some therapeutic benefits for the participants. Generally speaking there were only minor changes needed to some transcripts such as misspelling of names or towns, and although they would not be used in the data analysis, it added to the correctness of the account. No participant chose to have any data removed or withdrawn from the study.

One female participant made particular note upon reading her transcript, how ‘in tune’ I was with what she had to share and easily made sense of what had been a very deep and thought provoking dialogue. To me this is indicative of some of the deeper levels of understanding that occur between the participant and the researcher within a constructivist approach. A number of participants commented that their friends or family had read the transcript as well. One participant discussed it with an old friend and together they added some other pertinent information. The wife of the participant who sadly passed away spoke to me at length, and related that her husband had read the transcript prior to his death and now the family cherishes the story he had told. His wife thanked me for speaking to her husband and having an interest in his story. I felt quite overwhelmed by the many comments thanking me for taking the time to listen to participants’ stories and sharing their information with others. The intensity of their wish to help others and have their story heard has been one of the major motivators for me to stay focused on the completion my study. I felt I had made a commitment to the participants to complete what I had promised and not delivering on this promise was definitely not an option!

4.3 Data analysis

Deciding how best to analyse and present collected data is of critical importance in any research. In the developmental stages of this study, a narrative methodology was chosen, with the intent to construct ‘stories’ from each participant’s interview transcripts. However, due to the larger than anticipated response to the call for participants, it was decided that this was no longer practical, given the time involved in narratising each participant’s interview data. Developing ‘stories’ from interview data is, in the experience of both researcher and supervisor, a worthwhile but exceptionally lengthy task. Instead, it was decided that a thematic analysis of the data from the interview transcripts, as well as field notes, would be a more appropriate and feasible choice.

4.3.1 Thematic Analysis

Roberts and Taylor (2002, p. 539) described thematic analysis as a method for ‘identifying themes, essences, or patterns within the text’. Braun and Clarke (2006) commented on the widespread use of thematic analysis in qualitative research and emphasised that one of the benefits of thematic analysis is its flexibility and possibility to provide rich, detailed and complex presentation of the data. Additionally, this method is useful when handling large data, can highlight similarities and differences, provides opportunity for a collaborative participant/researcher approach and is suitable for policy development (Braun & Clarke 2006). However, the authors also propose that in spite of the wide use of thematic analysis, it is often poorly demarcated and rarely acknowledged (Braun & Clarke 2006). This view is shared by Ryan and Bernard (2003) who pointed out the importance of making the thematic analysis approach explicit to the reader for a number of reasons. Firstly, the identified thematic categories are a way of communicating to the reader the findings of the research and form the basis of later interpretation, discussion and recommendations. Secondly, it provides the reader with the opportunity to assess the methodological choice and lastly, it provides a ‘jargon’ free opportunity to share the research across disciplines (Ryan & Bernard 2003, p. 86).

According to Braun and Clarke (2006), a theme ‘represents some level of patterned response or meaning within the data set and essentially captures information that relates to the research question’ (p. 82). Ryan and Bernard (2003) described themes as ‘abstract (and often fuzzy) constructs that link not only expressions found in texts but also expressions found in images, sounds and objects’ (p. 87). They note that one way of identifying a theme is by asking the question “what is this expression exemplifying?” (Ryan & Bernard 2003, p. 87). It is important to note, particularly in view of the constructivist approach, that themes are not as seen as a passive ‘emerging’ or ‘discovering’ process, but an active process whereby the researcher clearly selects patterns and themes that provide meaning to the research question/s (Taylor & Ussher 2001). Therefore, the interactive process between participant and researcher does not only occur during the data collection process, but continues into the interpretive phase (Taylor & Usher 2001). Gilgun (2005) elaborated on the constructivist approach in relation to how the data are written up. She asserts that in the spirit of constructivism it is important that the voices of the participants and the researcher are not ‘swirling below the surface’ but their voices are clearly heard and ‘grab’ the readers’ attention (Gilgun 2005, p. 256). This creates a more powerful analysis that demonstrates skilful engagement of the researcher with the data thus enhancing the engagement for the reader.

Richards (2005) described various ways of ‘seeing’ and ‘testing’ qualitative data. One such method includes data coding and category handling. ‘Seeing data’ includes the initial processes of cataloguing categories, integrating them further and looking for relationships (Richards 2005, p. 165). ‘Testing data’ entails grouping data into meaningful groups, searching for opposing data and sorting data that do not fit the theme. Braun and Clarke (2006) have developed a systematic approach which integrates the processes outlined by Richards (2005) and their approach has been adopted for this study. Within this approach, six phases form the basis of the thematic analysis and the following table outlines these phases.

Table 10: Phases of Thematic Analysis.

PHASE	*DESCRIPTION OF THE PROCESS*
1. Familiarise yourself with your data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

(Braun, 2006, p. 87)

Applying the six phases of data analysis for this study provided a systematic framework to undertake the thematic analysis. The interviews were transcribed verbatim by a professional transcriber due to the large volume of interview data and my limited transcribing skills; however phase 1 of data familiarisation occurred on a number of levels. Once I received the transcripts, I proof read them by listening to the digital tapes and comparing them with the written data. Any mistakes were corrected and any data that the transcriber could not clearly identify were added. These processes ensured consistency with the spoken and written data and allowed me to listen to the interviews again. Interviews were then sent for member checking, and discussed as outlined previously. Following this I read the transcripts several more times and commenced with phase 2 – the coding process.

Braun and Clark (2006) described the coding process as a way of identifying features of the data that are interesting and meaningful. To aid this process, the interview transcripts were converted into a table which helped to clearly separate interviewer and interviewee contents. Colour coding was used to help with visualisation and to readily differentiate text which was purely conversational or not relating to the topic of exploration from data relevant to the research questions. Colours were representative of codes given to each data extract to identify similarities and differences and short descriptive titles were also allocated. The coding process yielded a very large number of data extracts which were potentially important in relation to the research questions; however data outside this scope were also collected for further scrutiny during the analysis process. I felt it was important to consider a broad range of data as it may have proved to be of interest in the later parts of the analysis, but could be discarded if it did not contribute to the topic under investigation. For example one participant spoke about her experience with health professionals and the difficulties she had with acknowledging her illness. Although this issue in the initial stages of coding did not directly relate to the area of research, as I further progressed with the analysis it was found to be important. As recommended by Braun and Clark (2006), the data, including the data surrounding it, was coded to enhance understanding of it within the context of the conversation.

Following the coding process, phase 3 - theming of the data, was the next step. Even though a large number of codes were identified, clear patterns or themes became apparent when data codes were compared across the entire data set. Similar codes were grouped together and allocated a theme. In the initial stages these were relatively broad but were gradually refined to be more specific and representative of the data. In fact following a number of drafts and considerations, I decided to use the participants' voices to name the themes. I felt this was more reflective of the meaning assigned by the participants and did not 'impose' or 'mould' the data into a researcher created framework. An example of the initial coding process and allocation of the final themes is provided in Appendix D.

Thematic mapping as described in phase 4 proved to be a valuable exercise. Being a very visual person, the mapping exercise helped me in creating a form of order within the data, as well as deciding how the major themes and sub-themes related to each other. The initial thematic mapping identified six major themes and 19 sub-themes but these continued to be refined during phase 5 of the thematic analysis process. Refining and naming the themes was a lengthy and intense part of the analysis, with frequent reflection, discussion with my supervisor and fellow students at University of Southern Queensland's annual research residential school. Names that I had initially chosen for the themes did not clearly reflect what participants were saying and during this process it became apparent the participants' voices had to come through more strongly. This was achieved by choosing theme names that came directly from the data and captured the 'essence' of each theme. Phase 6, the production of the final version of the analysis required further intense scrutiny by the researcher and guidance by my supervisor. Initially all relevant quotes were collected, however during the last phase selection of the most pertinent quotes occurred. According to Richards (2005), selection of quotations and data reductions can be challenging for researchers. One reason for this is that any criteria for reduction are not clearly identified in the literature. This was certainly what I experienced during the thematic analysis process and due to the richness and large volume of the data the process was intensified. For this reason the final phase took a substantial time to complete and decisions about what to include in the analysis chapter, and what to exclude, were difficult at times as I wanted to give every participant an ample 'voice'.

The final themes were also cross checked for relevancy in answering the research questions posed for this study. Richards (2005, p. 194) recommended that the goal of reporting is to 'depart from the data but ground all the threads of your theory in data' and this recommendation was followed by ensuring that all themes were relevant to the exploration of what it means for rural people to feel connected to the land and their experience in relation to cancer survivorship. Once all phases of the thematic analysis were completed to the satisfaction of the researcher and the supervisor, the analysis process was deemed completed.

4.4 Quality of the Research

The position of what constitutes quality in research has been discussed extensively in the literature with much of the argument centring on rigour and validity. According to Mantzoukas (2004) consistency between the 'what’ and ‘who’ is being researched and presented in the final report, is strongly correlated with the consistency, reliability, dependability and auditability of the research process as a means of demonstrating rigour. A great deal of debate has occurred around the issue of qualitative research not using ‘scientific’ methods and therefore having limited transferability to larger populations (Bloor & Wood 2006). But much of this critique can be challenged if the researcher can show that rigorous processes have been adhered to during the entire research process. Richards (2005, p. 192) emphasised that is it important for qualitative researchers to demonstrate validity of the data, meaning that it is ‘well founded and sound’ and that the methods used are reliable, so the reader can be confident that a thorough and consistent method was used producing a trustworthy outcome. This notion is echoed by Taylor who reported that rigour or ‘validity and reliability’ in qualitative research are demonstrated when research is conducted in a way that shows attention to detail, strict adherence to research processes and that the work can be scrutinised for ‘methodological accuracy and worthiness’ (2002, p. 377).

Sandelowski (1986) argued that a comparison of the validity of qualitative and quantitative research in relation to quality is meaningless due to their different approaches and purposes. Within qualitative research the use of diverse methodological approaches such as grounded theory or phenomenology, which each employ different strategies within the research process, further adds to the confusion of what constitutes rigour (Sandelowski 1986). The continued link of qualitative research to science has motivated thinking within the qualitative research fraternity on what aspects or processes need to be present for qualitative research to demonstrate a level of rigour. In view of the constructivist approach for this research the work of Sandelowski (1986) who applied concepts from Guba and Lincoln (1981) will be applied to demonstrate credibility, fittingness, auditability and confirmability.

Credibility of qualitative research describes the extent to which the participants and readers can identify with the research within their own lived experience (Guba & Lincoln 1981; Sandelowski 1986). Initially participants were provided with the transcript of their interview to ensure that the data were accurate and they could confirm that the transcript was a true reflection of their contribution to the research topic. Some participants chose to add further information either in written form or during our follow up telephone conversation. Several participants shared their transcript with family and friends and one participant commented on how his friend agreed fully with what was spoken about in the interview, thus further supporting the credibility of the data.

For this study, all presented data are the accounts of the personal experiences of the 17 participants. These accounts were their personal experiences and representative of their own personal view. However, similarities between participants' experiences could be identified and even in part had parallels to other studies looking at cancer survivorship and rural women's experiences (de la Rue 2003; Rogers-Clark 2002). In relation to potential readers of the research, I discussed my findings with a wide audience, such as fellow students at the residential school, friends, community groups and other interested parties and have received very positive feedback in relation to how the data are reflective of other people's experience. The study particularly resonated with the members of a local men's group, which has a large number of retired farmers. They reiterated how important their connection to the land was and how much they missed their farms. Many could directly relate to the presented data in form of direct quotes from the participants commented that this has been an informative and worthwhile study. Interestingly I also had very positive responses from people who were not from rural areas, but could clearly relate to the enjoyment and benefits of being outdoors. The positive feedback and verification received from many people who were not involved in the research, has added to the credibility of the data.

A potential threat to the credibility of the research from a positivist stance is that the researcher has become too close to the participants and is unable to differentiate their own experience with that of the participants, but this can be perceived as a strength as well as problem (Sandelowski 1986). In line with constructivist thinking, it was important for me to acknowledge my personal connection to the topic; however I have been mindful on a number of fronts to ensure credibility. Even though I have a strong connection to the land, I did not impose my personal views on the participants. I have also never been diagnosed with cancer and therefore have no personal concept of what it would be like to deal with this experience. From a professional perspective and as a person who has conducted research in the past, I strongly believe that the participants are the experts on the topic and through sharing their experiences, health professionals can get a more insightful picture on how people deal with their health and illness experience. Even though my connection to the land provided me with the impetus to commence this research and enable me to connect with the participants well, the primary focus was to expand existing knowledge and take what we already know to another level. This could not have been achieved without fully acknowledging the depth and richness of knowledge of the participants which conversely has now influenced my thinking. Extensive consideration has also been given to the analysis and findings of this study to comprehensively represent what motivated the participants to take place in this study in the first instance.

The second aspect of quality of the research refers to ‘fittingness’, meaning how well the findings of the study fit into the context outside the scope of the study (Guba & Lincoln 1981; Taylor 2002). The reality for many rural people is that at some stage of their lives they may be diagnosed with cancer and their experience will be different from that of their city counterparts (McGrath et al. 1999a; McGrath et al. 1999b). This study will expand current knowledge about the way some rural people deal with their cancer journey in relation to their connection to the land, an aspect that, until this point, has not been well researched. Studies that focus on the cancer experience of rural people predominantly look at issues such as the tyranny of distance and difficulty in accessing services (Clavarino et al. 2002; Hegney et al. 2002) and as mentioned previously much attention is on the acute treatment phase.

It is envisaged that exploring what it means to feel connected to the land for non-Indigenous people in Australia will contribute to gaining a better understanding of this integral component of rural life. Some of the aspects spoken about by the participants, such as pesticides and cancer, are discussed within medicine or agricultural science, however most of this information focuses on proving or disproving a possible connection without consideration of the opinion of the people who feel affected by this. This study has gained valuable insights into a topic that is becoming increasingly pressing in view of debates around climate change and population growth. Nursing has to stay abreast of ecological and environmental issues affecting people's health and illness, as we clearly cannot separate ourselves from this connection.

The outcomes of the study could also assist in better understanding issues that rural people face when staying in facilities that are not inclusive of the natural environment, such as residential aged care facilities or in tertiary health facilities which are usually in major regional or metropolitan locations. Although additional and more specific research would have to be undertaken, outcomes of this study may pave the way for more research in this area.

Auditability refers to the extent to which the researcher provides information about the decision trail used for the research (Guba & Lincoln 1981). Methods and processes should be clearly defined and congruent with the aim of the research (Taylor 2002). Documentation of the decision making trail should be such that if another researcher would conduct the research using similar methods, comparable results would be achieved (Lincoln & Guba 1985). Braun and Clarke (2006) provide a checklist of criteria for a good thematic analysis. This checklist enables a step by step checking process to ensure that each phase of the process is built upon the other, adding to the quality of the data analysis. Throughout this study, the processes as outlined by Braun and Clarke were strictly followed, ensuring each step was followed rigorously. In order to demonstrate adherence to each process step the following table shows the checklist for each step as identified by Braun and Clark (2006) but an additional column has been added outlining the strategies used for this study:

Table 11: 15-point thematic analysis checklist.

Process	**No**	**Criteria by Braun & Clark**	***Strategies Used For This Study***
Trans-cription	1	The data have been transcribed to an appropriate level of detail, and the transcripts have been checked against the tapes for ‘accuracy’.	*Data were transcribed verbatim by a professional person, checked against recording by researcher, changes made as needed for accuracy.*
Coding	2	Each data item has been give equal attention in the coding process.	*All data were systematically searched and coded. Formatting text into tables and use of colours assisted this process.*
	3	Themes have not been generated from a few vivid examples (an anecdotal approach), but instead the coding process had been thorough, inclusive and comprehensive.	*Entire data were considered for theme development, consideration was not only given to major themes, but minor themes were also included. Data representation is comprehensive and inclusive.*
	4	All relevant extracts for each theme have been collated.	*All relevant phrases from the transcript data were collated.*
	5	Themes have been checked against each other and back to the original data set.	*Multiple checking stages of themes and refinement. Realignment of themes with the original data set.*
	6	Themes are internally coherent, consistent, and distinctive.	*Thematic mapping done to ensure themes are coherent, consistent and distinctive.*
Analysis	7	Data have been analysed – interpreted, made sense of-rather than just paraphrased or described.	*Data were summarised including researcher’s observations during the interview process. Data were analysed, not paraphrased.*

Process	**No**	**Criteria by Braun & Clark**	***Strategies Used For This Study***
Analysis	8	Analysis and data match each other – the extracts illustrate the analytic claim.	*Multi-stage drafting of analysis to ensure that data examples were most pertinent to the specific analysis section.*
	9	Analysis tells a convincing and well-organised story about the data and topic.	*Analysis is built around a logical framework, encompassing all areas directly relating to the research questions. Each theme tells a story.*
	10	A good balance between analytic narrative and illustrative extracts provided.	*Researcher ensured that a good balance of participant's views via illustrative quotes and analytic comments were provided. Large volume of data made this process challenging.*
Overall	11	Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once-over lightly.	*Adequate time was allocated in the study plan to complete the analysis with the recognition that the analysis forms the foundation that the majority of the thesis hinges on.*
Written report	12	The assumptions about, and specific approach to thematic analysis is clearly explicated.	*A review of the research literature was conducted to investigate the thematic analysis approach. All processes and reasons for choosing thematic analysis have been discussed in this chapter.*
	13	There is a good fit between what you claim you do, and what you show and have done i.e., described method and reported analysis are consistent.	*This chapter (design & method) is wholly dedicated to reporting on these processes.*
	14	The language and concepts used in the report are consistent with the epistemological position of the analysis.	*The language and concepts are consistent with the theoretical underpinning of the constructionist approach. In-depth discussion is presented in the methodology chapter.*
	15	The researcher is positioned as active in the research process, themes do not just 'emerge'.	*Themes were developed from the data provided by the participants and the engagement of the researcher with these data.*

(Braun & Clark, 2006, p. 96)

The purpose of the doctoral study is to clearly demonstrate the ability of the researcher to apply a chosen method and methodology and to document this in detail in the thesis. The previous table outlines the processes for a systematic thematic analysis and the steps used in this study were included to mirror the recommendations made by Braun and Clarke (2006). I have ensured transparency in presenting all processes used for this study and by outlining those in detail allow close scrutiny by the reader. Therefore in conclusion, demonstrating validity and reliability in this qualitative study has been achieved in developing a research method that is congruent with the aims of the research. Issues of credibility, accountability, fittingness and confirmability have been discussed and applied to the study methods.

4.5 Ethical Issues

The research conducted for this study follows the recommendations made by the National Health and Medical Research Council (NHMRC). The Statement on Ethical Conduct in Human Research (NHMRC 2007) outlines the areas of consideration when undertaking research involving humans. Due to the emotional and physically challenging nature of being a cancer sufferer, particular emphasis was made to minimise the risk of harm to participants taking part in this study. In the first instance an ethics application was lodged to the University of Southern Queensland Human Research Ethics Committee and following a request for minor changes to the Plain Language Statement and Consent Form, ethical approval was granted.

Following the initial conversation with potential participants, a Plain Language Statement and Consent Form (Appendix B) was sent to them. The document provided potential participants with background information about myself, contact details, the purpose of the study, the selection criteria, the interview process and how the data will be handled, as well as ethical issues such as confidentiality, right to withdraw and secure data storage. I followed up all potential participants with a phone call to establish if they were still interested in taking part in the study and if they agreed, asked if they had any questions or concerns. None of the participants expressed any concerns about the outlined processes. The majority of participants returned their consent form prior to the interview, a small number chose to give me the form on the day of the interview. The follow up phone call also provided me with the opportunity to give participants the research questions and this gave them the opportunity to think about it and not feel they were being put ‘on the spot’ on the day of the interview.

On the day of the interview all participants were reminded about their rights as participants. I also outlined the potential risk of identification particularly in view of living in a small rural community. Participants were asked to choose a pseudonym to protect their identity. One participant in particular felt very strongly about protecting his identity as only his immediate family knew about his cancer diagnosis. I reiterated the processes I would undertake, such as removing any identifying data, securely storing data and maintaining strict confidentiality. A number of participants did not choose a pseudonym as they stated that they did not have an issue with confidentiality. They felt they wanted to share their experience with others and they were not concerned about people knowing about their experiences. This was partly due to the fact that they were well known identities in their community and their cancer diagnosis was widely known. Despite declining the offer to chose a pseudonym, I decided that everyone’s identify should be protected by assigning a pseudonym and ensuring that any identifying data, such as names, towns, hospitals or doctors names were removed prior to use in the data analysis.

One potential risk for participants talking about their cancer journey is that of emotional distress. Although participants for this study had to be at least 12 months post acute cancer treatment, the experience can leave life long scars. I had planned that if anyone got distressed, the interview would be terminated, I would provide immediate emotional support, and the participant would be advised where they could seek appropriate specialist help, such as from Lifeline. However, none of the participants experienced significant emotional distress when talking about their actual cancer experience, but more often felt emotional about the meaning is has bought to their lives. A number of participants became teary during the interview, but despite offers to cease the interview, wanted to continue. Once the interview was finished I ensured that participants were not feeling ‘left alone’ with their experience, by engaging in more general conversation as a means of debriefing, and having a ‘cuppa’ with them. Many of the participants had family members at their home and were not left on their own after the interview.

All interviews were taped on a digital recorder and participants were informed prior to the interview taking place that it was my intention to record the interview. I explained to the participants that this would enable me to fully concentrate on our conversation and would also eliminate me having to write everything down. Even though there is some thought that audio taping is intrusive and distracting to the participant (Lincoln & Guba 1985), this is not an experience I have had. I find the benefits of taping include capturing the entire interview without ‘filtering’. When taking notes, most people cannot write fast enough to take down an entire conversation verbatim, so they write what they think is important at that point in time. However, at times some aspects of the dialogue which first appeared unrelated or irrelevant may later turn out to be an important piece of information. Audio taping enables the researcher to listen to the transcript many times, as well as detecting nuances in the conversations which cannot be captured by written text. Additionally, participants may feel unsure if the written notes are a true representation of what they have said during the interview, whereas by using the actual recording, participants could easily be provided with the recording for verification. In my experience audio taping has been the most successful method in capturing all the information from the participants and everyone was relaxed about it once I outlined the reasons why I chose this method.

All interviews were transcribed verbatim by a professional transcriber who is bound by a confidentiality agreement. As described previously, a copy of the transcript with an accompanying letter was sent out for member checking to each participant. I allocated a couple of weeks for participants to read the transcript and contacted them by phone to ascertain if the transcript was an accurate account of their experience and discuss any changes. All participants were happy with the transcript and some had given it to family members and friends to read. Some minor changes were made, such a misspelling of towns and clarifications. Two participants wanted to add to the information and sent me a letter with further explanations and additions to the transcript. During the follow up phone call I also informed people of the status of my work and the anticipated timeframe of completion.

The storage and protection of data occurred on a number of levels. All interview data were given an identification code and stored on a password protected computer, as well as a memory stick which was stored in a locked cabinet. The hardcopies of the interviews are also stored in a locked cabinet. All data will be retained for 5 years in accordance with National Health and Medical Research Council (NHMRC) guidelines for Human Research (2007). All data were coded in a way to conceal the identity of the participant.

In conclusion, this study aimed to adhere to research processes that demonstrate a number of hallmarks of good research. Ethical issues in relation to confidentiality, respect of the rights of the participant, ethical engagement and data protection were strictly adhered to. This was reflected in the fact that no participant who agreed to participate withdrew from the research and the positive feedback received during the follow up telephone calls. Due to my previous research work experience, I am very aware how imperative confidentiality and data protection are and all efforts have been made to achieve this. The qualitative research design was extensively researched prior to commencement, administered accordingly and strictly adhered to for rigour.

4.6 Conclusion

In conclusion this chapter provided a detailed description of the research process followed for this dissertation. The chosen study design, a qualitative, collective case study, provided the most suitable approach in answering the posed research questions. This chapter also discussed the recruitment and selection of the participants, data collection as well as data analysis. A thematic analysis technique was used to identify themes within the data and to present these in a way that is representative of the findings. Additionally, the quality of the research and adherence to ethical issues were also demonstrated in this chapter.

The following chapter 5 will now present the findings of the thematic analysis of the data. Seven major themes were identified and these include 1. The land is part of me it never leaves you, 2. My personal kingdom, my sanctuary, 3. Take care of the land and it takes care of you, 4. I’ve almost got no friends left, 5. You’ve got to live with nature – she is a pretty hard task master, 6. I really think it has healing properties and 7. That’s what country life is about.

CHAPTER 5: FINDINGS

The focus of this study is to understand rural cancer survivors' sense of connection to the land and how this influences their post acute cancer survivorship journey. The following chapter presents a thematic analysis of verbatim accounts of the participants' rich descriptions of their experiences, which were analysed as stand alone narratives as well as in relation to the entire participant group.

The voices of Ben, Mark, Mimi, Georgia, Sam, David, Leanne, Jules, Tom, Grant, John, Greg, Sue, Anna, Rick, Keith and Eve provided deep insights into their connection to the land and how much they cared about the natural world. During the analysis it became apparent, that being connected to the land had been an integral part of the participants' lives and continued to be of significant importance during their journey through and beyond cancer. Interestingly, talking about their cancer experience was not what dominated the conversation as participants were particularly keen to share their stories about their sense of connection to the land. All participants had a lifelong connection to the land, and for many this connection intensified during their cancer journey, as they drew strength from a familiar source.

At the end of the analysis, seven themes were identified, which described the spectrum of responses from the participants. The themes encompass the diverse range of meaning in relation to feeling connected to the land, and the range of effects that this connection had on the participants' lives, in particular on their cancer journeys. The seven theme titles evolved from the direct quotes of the participants:

- The Land Is Part Of Me, It Never Leaves You,
- My Personal Kingdom, My Sanctuary,
- Take Care Of The Land And It Takes Care Of You,
- I've Almost Got No Friends Left,
- You've Got To Live With Nature,

- I Really Think It Has Got Healing Properties
- That’s What Country Life Is About.

As discussed in the previous chapter, a thematic analysis approach was chosen to categorise and present the information provided by the participants. This was important on a number of fronts as the data collected from the interviews were extensive and needed to be harnessed and condensed. It was also a useful way to eliminate information that was not directly relevant to this study. The outcomes of the thematic analysis produced the seven themes which are representative of the seventeen participants’ experiences of living in a rural setting and how their connection to the land has accompanied them throughout their life’s journey. Participants discussed their intimate bond with the land, and their relationship and interaction with the natural environment, including its challenges and the benefits. This was further explored in the context of being a cancer survivor and how this connection to the land has impacted on their survivorship journey.

5.1 The Land Is Part Of Me, It Never Leaves You

Participants explored what they believed to be the origins of their strong sense of connection to the land. Farming and living on the land have been a longstanding connection for many participants. Several participants lived on properties which had been in the family for many generations. They reported that their parents taught them the skills needed to live on the land, which enhanced their love and understanding for their environment. This ancestral link was not only seen as something connected to a particular parcel of land but for some, an inner propensity, maybe even a genetic predisposition that ran in the blood of generations of their families and spanned across continents. Participants described how their forebears were farmers in other lands before coming to Australia and how their desire to stay connected to the land continued. For these participants, being connected to the land was a feeling that ran deep within and was part of the fabric of their lives. This feeling had been with them all their lives; and involved an understanding that everyone is part of a greater existence. Participants described the origins of their sense of connection to the land in a number of ways:

> *Why do I feel connected to the land? Because it's my life. It's my – how do they say? – "it runs in my blood". It's everything I know, it's everything I do. The reason I do everything is because of what I've learned from the land. It's taught me survival. It's taught me harsh realities. It's the land. (Mimi)*

> *I heard a bloke say about my father, "Now there's a bit of him in every clod of dirt". That applies to me too. I've tilled this soil since I was 12 years old and that's a big thing. (Sam)*

> *My family – I'm Irish by birth – were 300 years on one side of the family on the same piece of land, and then on the other side of the family it was 500 years. You know your answer lies here. It's a deep – well genetic heritage. (David)*

Two participants reflected on their childhood experiences of growing up on the farm and their sense of being part of the land. They described spending much time outdoors and a natural feeling of being one with their environment. This was not something taught to or imposed on them by their family, but a chosen and integral part of their childhood. Ben and Leanne described their childhood connections to the land as:

> *Well we sort of grew up with it as children – well, you just get a feeling for the land. Its part of you, you're part of it, its' not something separate.If you're not part of nature on the land…well, you're in the wrong place…Like it's not just a bank balance. (Ben)*

> *That's always been with me, ever since we were children. We would go out into the paddocks and just lay down in the grass and watch the clouds and, yeah, we've always been part of the environment. (Leanne)*

Two participants talked about living on the land in comparison to living in more urbanised areas. Jules believed that that living on the land is an intrinsic human need and not living in this environment could be detrimental to people. She described a feeling of entrapment at the thought of being faced with living away from the land:

> *I think we have like almost a genetic imprint within us but we are so divorced from it, most people are so divorced from it that maybe they don't even know the way back, and that's a tragedy I think. I have always thought that I would hate to live in the suburbs. I have always thought that that would be dreadful and I feel for all the people who do live in those environments where they are –well if I were them I would feel trapped. (Jules)*

This feeling was shared by Ben, who had radium treatment in a major city for seven weeks and likened his experience to being 'a prisoner of war'. This description did not relate to the treatment, but to his feeling of having his freedom of space taken away whilst staying in the city:

> *Well it* [the radium treatment in a major city] *was just like being a prisoner of war, you get what I mean. It was not my fault. Like if you're a criminal and you go to jail, you do the crime, you do the time, but stuck in bloody* [major city] *for seven weeks. Oh it was very soul destroying for a bushman. (Ben)*

After spending most of her life on the farm, the thought of leaving the land was a difficult decision for Sue. She described her connection as something that stayed with her no matter where she was. In order to maintain her connection when she moved to a regional town, she continued her association with people from the land. Sue explained:

> *I've lived on the land all my life until I came here and I thought, "How can I?"...I wondered how I would adjust but it's just part of you and it never leaves you no matter – you're in town but you still like to associate with country people which I do quite a lot. (Sue)*

Even though all participants had been on the land for most of their lives, some found expressing what it meant to them to 'feel connected to the land' challenging. It was something that was an integral part of their daily lives, however, until now, not something that they had ever really thought about or been asked to describe. Interestingly the participants who had expressed difficulties in describing their feeling of connections were the ones who often delivered the most powerful and rich descriptions for this study:

> *Yeah, I might not find the right words, but we're elemental beings aren't we? I think that we're from the earth, we go to the earth, - or the sea, maybe. (Jules)*

> *No it’s just the quiet atmosphere and so forth and so on. So, yeah, but I don’t know how you describe it. (Tom)*

Although it was difficult for participants to express their connection to the land, their comments suggest that their connection has been a lifelong bond which continued even if they moved from the rural environment. Their connection to the land was often formed during childhood and remained with them into adulthood. The following theme ‘My personal kingdom, my sanctuary’ provides an insight into the participant’s perception of their rural environment and the sense of freedom and solace it brings to them.

5.2 My Personal Kingdom, My Sanctuary

Many participants gave detailed descriptions on how being on the land and among the natural environment gave them a feeling of peacefulness, a place to retreat. It also meant a feeling of freedom and solace from the rest of the world. Mark, a burly farmer who was very passionate about the land, became quite emotional when talking about his feelings for the land. It had become his sanctuary when he was working another job away from the farm which, at times was very stressful for him. Grant on the other hand lived by himself on a small property and relished the peace and personal freedom. Mark and Grant explained:

> *I have a feeling that in some way it's* [the land] *my personal kingdom, my sanctuary. I think I've explained the kingdom but the sanctuary is important because in the job you get lots of stress from Head Office who are very demanding…But for me to come back to my farm is a sanctuary where I can get away from all of that and it was important. I'm getting emotional* [laugh]. *(Mark)*

> *I reckon I don't have to die, I'm in heaven now. Well its peace and quiet. You wake up in the morning, like I leave the door wide open. The only thing I worry about is a snake. You hear the birds in the morning and yeah, beautiful. I had a bank manager came out one day, I wanted to borrow some money and he asked me, "How much do you reckon it's worth?". I said "Well this is my bit of paradise; it's worth a million dollars." He said, "I will give you eight thousand." I said. "See you later mate. Close the gate behind you and never come back". (Grant)*

Three participants described that living on the land also provided a perfect lifestyle. The freedom of space coupled with the diversity provided an interesting working life and a perfect environment to raise children. As many participants explained, despite the hardships of drought and the physical hard work of farming, they would not have chosen a different lifestyle. John and Greg gave an illustration of their way of life on the land:

> *A terrific life. No better life… It's a casual life style and an independent one. It's tough but you don't take any notice of that. The beauty of it is you're more or less doing something different every day. You might be mustering today, tomorrow you might be fixing the windmill or you know it's the lifestyle. That's the one thing they can't take away from the bush is the lifestyle. In the bush you don't look for holidays…because you're happy and contented with what you're doing. (John)*

> *I would never change my lifestyle. It's a wonderful environment to bring up the children in and that and you're close to nature. And you rely on the Good Lord to send the moisture and I would never have it any other way. I enjoyed my life on the land even though it got harder and harder. (Greg)*

The isolation and degrees of loneliness that often go hand in hand with living on the land, was something cherished by the participants. They described how being far away from human contact was relaxing and liberating, giving them a sense freedom. Anna lived in a very remote area and often spent time on her own, but felt that it provided important time for reflection without interference. This feeling was shared by a number of participants and they remarked:

> *I think you know some people don't like spending time on their own, but I guess I've had to learn to be on my own and I don't actually mind. ... It's good because when I go for my walk I often sort things out. Without really going out with the intention of sorting anything out, often thoughts will come into my head that helps me work out, "Oh, yeah that's what I should do."… I pick that spot where I don't have to even wave to anybody or do anything because I sort of think, "Well I don't want that intrusion." (Anna)*

> *I mean I could be confined to my chair at home, but I wasn't a prisoner of war because I had all 17,000 acres around me. (Ben)*

> *I like the bush [laugh]. You know in the city it's always noisy and you can't go outside and, yeah, I don't know, I just like the bush. I find it so relaxing and peaceful. (Mimi)*

> *I don't feel lonely living out here I find it's very peaceful. I don't feel isolated from medical, telephones, knowledge, anything because I know how to access it. (Georgia)*

However, despite recognising the benefits of being connected to the land, Jules spoke about her feeling of isolation during her initial recovery time post cancer treatment. This feeling of isolation was also coupled with a strained family relationship and limited ability to share her feelings with others. She explained:

> *When I was doing my meditation I would lie under a tree. I wanted that connection and I wanted to be outside and if I wasn't outside then I wanted to be lying on the floor where the sun was on me beside an open window, so yes, the connection was important. And I was aware that the connection was important but I was also a bit lonely. I would not now want to go back on living on acreage and being surrounded by nature because I feel now about that, that it's a place I like to visit but I wouldn't want to live there. And that's just because of the isolation that I experienced when I was in that situation and I think it's – it needn't be like that but that's how my experience of it was. I was in two minds about it, I firmly believed it to be restorative and healthy. A restorative and healthy environment in which to recover. (Jules)*

Another participant, Sue, noted how living in an isolated area can become increasingly difficult with age, particularly in relation to health issues:

> *Well when you're on your own, in my situation now, and you're getting older, you need people around you. If I was – I wouldn't want to be isolated at 80 and knowing that you could fall down, break your leg or something. (Sue)*

For some participants being connected to the land and spending time alone in the bush also signified a spiritual connection. Here they found themselves close to their 'creator' and part of creation. These participants expressed that religion played an important part in their lives and the bush essentially became their place of worship. Having time to 'chat' to God was very important for Anna and Georgia. Here are their comments:

> *I would just go out there and I sort of – I have a little word with God and we talk about things and it's just like nothing is the same. You know you look at your sunsets, because we've got great expanses and you see beautiful sunsets here and you just sort of seem to know that you're never going to see that same sunset again and it kind of makes you marvel at, you know, at the beauty that we have around us and you appreciate so much that you're able to be out there and enjoy it. ... I tend to try to think thankful thoughts and sort of – instead of sort of concentrating with what I'm not happy with ... So when I go outside I just talk to God and I tell Him how thankful I am that I have been given another day and I try to do that every morning as I wake up actually. (Anna)*

> *I like to go over the hill and I sit down on the ground and just look around, where there's no phones and have a talk with my creator… And I found that my faith has got me through as well because I do go to church and I believe that that has got me through. (Georgia)*

> *Well, I think being on the land and being very closely connected to your land helped a terrific amount because you've got that spiritual – for want of a better word, you've got that connection, you know that I mean? You've got*

> *something to hang to, something that means a lot to you and you can see. (Ben)*

However, not all participants shared this sense of spiritual connection and two participants expressed having doubts about the concept of spirituality, however Mark agreed that he had Christian beliefs. It has to be noted that ‘spirituality’ was not specifically defined in order to allow for individual interpretation. They commented:

> *I can’t sort of get a hold of this spirituality that particularly Aboriginal people talk a lot about. I’m sorry I can’t get my head around it. (David)*

> *I don’t think there’s a spiritual connection. You know I don’t disbelieve that sort of stuff but I’m not a spiritual person as such. I do have Christian beliefs. (Mark)*

Undoubtedly rural living presents many challenges for rural people however for the participants in this study, living on the land was their sanctuary from the stresses of life, a place they could be themselves and find solitude. Some also found their spiritual connection particularly strong when being among nature. Conversely living in a rural setting could be difficult in times when support from others was important. The next section looks at the theme of ‘Take care of the land and it takes care of you’. It describes the symbiotic relationship of the participants with the land which can be nourishing and supportive on one level but can easily be disturbed due to poor land management practices. Taking care of the land was seen as an important contribution by participants as a way of ensuring the sustainability of farming for future generations.

5.3 Take Care Of The Land And It Takes Care Of You

In this study participants described their relationship with the land in a variety of ways and how they fit ‘in the big picture’. They saw themselves as having to work with nature, accepting the powers of nature and being part of the natural world. This relationship was also seen as symbiotic - the land was cared for by the participants and the land took care of them by providing a source of food and income in return. Being on the land enabled participants to grow their own produce, learn valuable lessons of survival, life and death and shape their general outlook on life. Many participants felt very strongly about being good caretakers of their environment and saw it as their responsibility leave the land in good shape for generations to come. Participants provided the following explanations:

> *You’ve got to develop your country with your environment in mind and everything got to be attuned to nature and it just makes your heart sing. It’s a practical bond, the spiritual bond as well. One terminology is the dumb love of the land, if you get what I mean. Like its part of you, you suffer with it, its part of your life. You try to look after it, it looks after you and you go through all its moods… Live your life as though you’re going to die tomorrow, but farm your land as though you’re going to live forever. So if you make a decision you’ve got to live with it for 400, 500, 600 years. (Ben).*

> *I just, well I like to see the land being looked after... The ones that are going to be on the land are only the ones that can look after it because if they don’t look after it they are not going to survive on it. (Rick)*

> *Yes, if you treat it right* [the land] *it will treat you right, yeah. It’s everything’s there for you. But if you want to abuse it, it will abuse you too. (Greg)*

> *That’s what I’ve learned off the land. You give back what it gives to you. (Georgia)*

Just like the previous participants, Jules and Anna felt an important part of their connection to the land was to care for the environment by implementing strategies which enhanced conservation of the natural resources. They described some of the initiatives:

> *I feel very lucky to have that opportunity and as far as connection to nature within my immediate environment here goes, I am trying to do things like have water tanks and I want to put solar panels on the roof and solar hot water and grow a little more of my own food even if it's just a few green vegies, you know put in some fruit trees… (Jules)*

> *Yes because we've always been on the land and I've always been a bit of a conservationist in a way because I don't like wasting water and I don't like wasting electricity and I'm a little bit sort of – like I don't turn my air conditioner on until it's absolutely necessary and things like that, but I don't know if that's got anything to do with it. It's just how I was brought up that you should, you know, you don't need to waste things that don't need to be wasted. (Anna)*

The understanding of the complexity and fragility of the land in relation to human intervention also caused a level of concern for three participants. They were worried about the continued degradation of the environment in Australia and around the world due to population pressures and poor management practices. They felt upset knowing that their ability to influence any changes for the better is limited and felt a sense of resignation. This is what Jules, Mark, David and Leanne had to say:

> *I think it's almost too late and that for me is something that really can get me down if I stop to think about it. That destruction of nature that's happening to our planet right around. It can be extremely depressing and very, very* [sigh] *disempowering. (Jules)*

> *Yeah and population issues is causing a lot of the environmental degradation and, of course, because of our money system, etc, we demand a higher and higher standard of living. (Mark)*

> *Our environment is just being destroyed. I can remember the river, willow trees. The river – you could go down of the afternoon and it would be running and it would be miles of water. And it was just so lovely in the afternoon. Now you go down to the river and there's hardly any water and there's hardly any trees left. (Leanne)*

David highlighted that beliefs about how best to care for the land are divided, with his comments about current land conservation approaches:

> *Well here in Australia, and particularly in Australia the tragedy here is that we are basically abandoning our landscape and by that I mean our green friends talk about preservation, that talk about national parks and they talk about setting aside so called pristine areas. This is absolutely and utterly disastrous because the Australian landscape burns and the longer we set it aside the greater is going to be the fires. We have to get that sorted out. (David)*

The notion that taking care of the land the land takes care of you, became particularly evident when participants were discussing how being on the land gave them a sense of independence due to the ability to produce their own food supplies. Participants explained that farming the land gave them an understanding of the origins of food production but it was also very fulfilling to 'get the hands dirty'. Some examples included:

> *The land supports you. It gives you air, it gives you food, it gives you meat. … I suppose coming from the land we see where it all comes from. Even though*

> *we buy stuff from the shop we still know where it comes from…Yeah, it's connected to me because I know how important it is and it's a vital resource. We won't be here without it. (Mimi)*

> *One of the beauties of it is that the food we eat is nearly all our own. We have our own meat, our vegetables… You get out and have a dig in the dirt and just see what you produce, taste it. (Georgia)*

> *Uhm, growing things, yeah just creating and feeling the soil. See I went to work outside because of the sunshine because you can actually feel the earth. Nothing is better than that. You're one; you're one with the environment. (Leanne)*

An interesting observation from one participant suggested that historic connections to the land might run back in time far beyond a family's living or documented memory. His comment, which reflected farming as an original occupation within human civilisation, suggested a far deeper sense of connection build on the land as provider. One gained a sense that the land provided all that was needed to sustain life on a basic level. Mark explained:

> *I think it's* [farming] *the original occupation, and it's fundamental to life because we produce the essence of a full life too. To me life on the land is the original, natural environment for people to live in, not towns or cities.… Civilisation didn't start with a city …When I bought my first bit of land of five acres, I made the statement that 'They will never starve me now." (Mark)*

When talking about being outdoors and working the land, some participants made special reference to their gardens. This was often due to a number of reasons, either they were retired and had moved to a smaller block of land, or they kept a house garden nearby their rather large and often arid properties. For participants who had left their properties, having a formal garden or vegetable plot helped them to continue to ‘get their hands in the dirt’ and grow their own organic produce. Some participants enjoyed their gardens for relaxation and green space in a dry and unrelenting landscape. This is what they had to say:

> *I love going out there* [in the garden]. *I can go out there and sort of almost have my lunch. It takes – because – it is my therapy. I escape out there because my husband has got a very stressful job and we have a lot different personalities. (Anna)*
>
> *We often sit out in the garden, well I do. I love just to be out in the garden and people say to me how our garden is like a tapestry, just things flow. (Georgia)*
>
> *And I can get the same solace by going into my garden. I can’t live without dirt under my finger nails. (Ben)*

In view of the emphasis participants placed on the importance of maintaining a caring relationship with the land, it is not surprising to find that the participants were equally aware of the consequences if this symbiosis was disturbed. As the land was the primary source of food production and income for the participants, the pressures of maintaining high levels of production had been integral to their farming practices. For the participants in this study, taking care of the land included the use of fertilisers and agricultural chemicals to increase the productivity of their land. The use of pesticides and hazardous substances were part of everyday life for many of the older participants including the use of pesticides that are now banned as dangerous chemicals. The following section discusses how participants saw their cancer diagnosis in relation to pesticide use under the theme “I’ve almost got no friends left’. Their reflections provide an insight into the impact pesticide use has had on the participants, their friends and colleagues, their environment and ultimately their farming practices.

5.4 I've Almost Got No Friends Left

During the initial participant recruitment phase, many participants contacted me to express their interest in talking about their experience of being exposed to farm chemicals for many years and how they believed this had contributed to their cancer diagnosis. All the participants aged over sixty, talked about the dangerous practices employed during their younger years in relation to pesticide use. They also spoke about the loss of many of their farming friends through cancer. At that time, farming the land almost always involved the application of dangerous farm chemicals, many of them now banned. At the time, these chemicals were regarded as safe and hence people did not see the need to protect themselves. Almost all participants, but particularly the men, recounted stories of repeated and extensive exposure to farm chemicals or other farming related substances:

> *I had a thing that we built and used to use one old draught horse in it. It had six sprays behind it and a little engine driving this pump and I used to walk behind that. I never used to wear boots. I could walk on lucerne stubble with no boots. And you would be wet from here down for hours with DDT and then of course you come to harvest this crop here, you use the seed of that to plant the autumn crop and when you'd store it, like you'd get this DDT, these big paper bags of DDT and when you were tipping it out you would grab, bare hands, just grab handfuls and pitch it and like – now I blame that for what I've got. (Sam)*

> *We have always, until it was banned, used 245T, which is the Agent Orange Dioxin. Now one of the techniques of dealing with that was to go in with 245T and spray it, but we used a thing called a blower mist. Well a blower mist is a machine you put on, you strap on your back, and there is a little two-stroke engine on the back of it and a fan, a big round fan, about that round and it blows through this elephant's trunk. You're holding this elephant's trunk thing and the little engine is going on the back and its all around you and all over the place and we were living in it. Why worry about something that*

> *doesn't do anything to you, yeah? I remember having two or three tins of it after it was banned and still using it for maybe 12/18 months after. (David)*

> *And like even 30 years ago you weren't told anything about the poisons you were using and you know everyone gets around – you know flies in the house or something, they would squirt all this muck around. Yeah anyone around the table would cop this horrible stinking muck. (Eve)*

Even children were not spared from chemical exposure and David recalled a story when boys on the farm were used as 'markers' so the spraying planes knew where they had been.

> *21 times that aeroplane flew over there and the boys used to go down and mark for them and the boys marked with a plastic rain coat and they would mark for them and they would stand and wave in the row and the aeroplane would come and…they would just go down on the ground and the aeroplane would go over the top of them then and then they would run 10 rows over or whatever it was and the bloke would go round, and go down, straight over the top of them. Just the way we did it was just incredible. (David)*

There were a significant number of recollections about how pesticides had impacted the health of humans, animals and the environment, and some participants felt certain there was a strong causal link between their exposure to pesticides and their cancer diagnosis. Following are examples given by participants on the effects on human health:

> *My own personal opinion is if it was anything to do with my farming lifestyle that caused me to be in the situation I am now in, it would have to be DDT and organophosphates. If that's got anything to do with it all, that's what I would be blaming for it. I never smoked and very seldom ever touched alcohol, so… If I never had this I would probably live to be 100. Look my*

> *heart is perfect, me lungs are perfect, everything is perfect, but this bloody stinking pancreas thing is going to kill me. (Sam)*

> *I'm quite sure it's* [the cancer] *from chemicals on the sheep. Well I definitely think so because there was none sort of in our families before this. Like it's – it turned up in this generation with sheep and, well I would be surprised if it wasn't chemicals. Oh, you've got to jet them for blow fly and all sorts of things like that and that's why we try and run a completely organic organisation now. (Ben)*

One participant, David, elaborated on how many of his male friends had died of cancer at a relatively young age, although their wives had good health. He assumed that due to the fact that most farming women were not directly involved in pesticide application and handling of chemicals, that this spared them from a similar fate to their partners.

> *I've almost got no friends left. Because of dying from cancer. All my old people I grew up with, I can rattle them off.* [Name of a friend] *I knew him all my life, died at 35 of Leukaemia. And his wife swears absolutely that it was chemicals that killed him and he was a bean farmer using a lot of pre-emergents in beans and a whole lot of other chemicals. He was the first one and then another friend that I farmed with for 30-odd years, he died of cancer at 65. He was growing fruit and vegetables there, apricots and plums and stone fruits, stuff like that. He had a good sense of humour right to the end* [laugh]. *Just got up to where he could get the pension and got snuffed out. And then another friend again same background as me for 40 years, he died at 60 and died of cancer and he lived here in* [town] *but his background was cattle farming… And then two other blokes,* [name] *died about a year ago, exactly the same age as me because we went to school together and he died of Leukaemia at 60 a year ago, so he would be nearly 66. And then another timber man, similar background, he died about two years ago but he was in*

> *the timber industry and ran cattle and horses and stuff like that so he would have been spraying things all his life. (David)*

> *Went to a funeral the other day, she was only 46 and she had cancer of the lung and it killed her within eight weeks. It was a tragic thing but I think it's the side effects of where they lived and the chemicals they used. (Greg)*

Mimi and Georgia spoke about their particular situation and how they knew of other cancer cases around the same time of their diagnosis. They were torn between doing what they loved and being caught in a situation they did not have much control over. They explained:

> *There is a theory around* [town] *because I was the third one in my class to have cancer, so there's theories going around that they had a big spray in 1983 so they reckon chemicals or something but we all had three different types, so…She had Leukaemia, I had* [type of cancer] *and I can't remember what the male had but it was in his hip. I mean my parents have sprayed and many other parents have sprayed so …Yeah but I don't know. (Mimi)*

> *This is where I struggle a bit because my cancer was caused, as they say, from oestrogen dominance and they said they could not rule out that my cancer was caused partly from all the hormones we've used in the pig feed and I'm the third pig farming lady who'd had* [type of] *cancer and I struggled with that – I still want to get out of the piggery because of that and I wear protective everything ... It's – we used to inject the sows with hormones stuff say, so my goal still is to get rid of the piggery and my husband said, "You can't blame your cancer for that." And I said, "No I can't but I still say that it contributed as well as my genetic make up. Mm, so I go to work down there every day knowing that part of my health was caused from the industry we choose to be in and I do struggle with it a bit. (Georgia)*

For participants who wanted to find out if years of exposure to farming chemicals had been the cause of their cancer, found their health professional had not been particularly helpful or supportive. Participants were given a variety of opinions ranging from ‘no connection whatsoever’ to ‘yes, it could be possible’. These answers were satisfactory for some, but causing a level of frustration for others:

> *When I was diagnosed with cancer I said to the specialist down there in* [town], *as to whether it had anything to do with it anything. He said no. He said it's just a cell that's gone mad and the body has recognised it instead of destroying it. He said we've all got those cells in our body. (Tom)*

> *And well when he* [the doctor] *was taking those tests you know he wanted to know what I done and I said I was farming and that and I said to him, "Oh, I used a fair bit of 24D." "Oh yes" he said, "I have too." He said, "That doesn't affect you." A lot of people reckon that but* [the doctor] *said, "No" he said, "I used a lot of that when I was a kid."(Rick)*

> *Well one doctor did say that he treated a woman for a chemical spray she – well, she used to wear one of those chemical backpacks and across her back where it was dripping left her a very nasty cancer. Yeah and that's been the battle, finding somebody to believe me. The minute I say I had chemicals on my hands, "Sorry." (Leanne)*

Despite inconsistent information and limited scientific evidence supporting the pesticide exposure and cancer link, a number of participants were not willing to take any more chances. Their cancer diagnosis caused a shift in their thinking about their farming practices and evoked a change in their approach. Some chose to start organic farming, started to grow their own organic vegetables or become more careful in their handling and application practices. Greg, Georgia and David described their shift in farming practices knowing this would not only benefit them but also their environment:

> *I did use chemicals before I woke up to the fact that they weren't as safe as they say they are. And then when I found out what was going on, I went into organics and things like that. I just used to shy away from the boom spray and the knapsack because I knew what danger it can inflict on you because our skin breathes just like the plants and they might die within a week/fortnight but, as I say, we could go for 10, 20 or 30 years before it gets the better of us, but it will get us eventually. (Greg)*

> *I love to get out in the garden there and grow our own vegies because they don't have sprays. And you know just our own chooks and most of it is our own, yeah. (Georgia)*

> *You know we started sort of 15 years ago basically not using any more chemicals that we could get out of. We stopped dipping – that's technological too because we get pour-on now and you can stay away from it. You can wear gloves and you don't get it all over you and you don't rub yourself on the cattle, so you know we did all those things that. (David)*

Reflecting on their situation, three participants recognised the difficulties farmers face when trying to balance production with the use of farm chemicals and how difficult it is to escape exposure in today's world. Participants concluded:

> *No, it's out of control. Yes, they're caught up in a situation, debt and production and they've just got to keep going. (Greg)*

> *We live in a world where we're surrounded by toxins and pollutants and so you know people are going to become ill. (Jules)*

> *Well, I can say that my health was partly caused from my job on the land. I don't have to, but I need to face that and to find a balance with my love for*

> *the animals, my love for what I do, versus what it's given me – two things. (Georgia)*

On the other hand some participants were less intense in their views, wondering if there was a connection, but feeling somewhat philosophical about the origin of their illness and choosing not to dwell on it.

> *I think because everyone just goes, "Oh, well, you know, country people. Oh, well, let's keep going, its part of life. Let's keep trudging on and tapping. No point dwelling on it." Yeah there's no point wallowing in self*-pity *or anything. (Mimi)*

> *It's very – it's a very isolating experience and you think, "Oh, you know why me?" And then you think, "Well, you know, why not me really?" (Jules)*

Recognising the fine balance between the health of the environment and their personal health, the participants were acutely aware of the importance of being attuned to their environment. The next section looks at the theme of 'You've got to live with nature- she's a pretty hard task master'. It describes the participants' need to be 'in synch' with their environment and to listen to and observe nature in order to learn from the land and deal with its challenges.

5.5 You've Got To Live With Nature- She's A Pretty Hard Task Master

Being connected to the land meant for some participants being acutely attuned with nature. Participants like Mimi portrayed it by explaining that just standing still in the bush and listening to and observing what is happening around her, has taught her many things about nature. Lessons from the land gave insights into the cycle of life, an understanding of all other creatures living around them, as well as the harsh reality of life and death. Participants felt that their level of awareness was essential to living in the bush as nature was perceived as unpredictable, even dangerous at times, and participants saw acceptance of nature's powers as the only way to successfully live on the land. Their connection has led them to study nature as part of their daily lives, to wonder at its richness and to accept the lessons as an integral part of their existence. Mimi, Ben and Mark gave accounts of their experiences:

> *When you're hunting but also just when you're standing up the paddock,- you hear more, you sense more. It's like you don't have to see it you can sense it. …But yeah just being calm and just standing there and going, and listening, listening to the birds, listening to the cows. Cows can tell you when they're getting attacked, getting chased. Birds can tell you when there's something that they don't like or if it's too quiet, well then you know something's wrong Yeah you can just learn a lot of things from just being quiet, whereas here [in town] it's just so noisy. (Mimi)*

> *You've got to roll with the punches and you've got to live with nature. Not fight nature. There's people who fight nature and get into trouble. I mean she's a pretty hard task master. You've got to be psychologically adjusted. (Ben)*

> *I've got a natural love of animals and plants, including trees and soil. …But the more I know about it the more I realise how little I know. It's just – you*

> *never seem to get to the bottom of it all because there's just too much to know. (Mark)*

Participants believed that life and death go hand it hand with living on the land and there is no escaping from this even when you are a child. The realities of having to kill animals either for food supply or to relieve suffering are balanced by recognising and accepting that this is a natural part of the cycle of life. Mimi and Mark explain:

> *With the drought we're seeing calves being killed. We're seeing them die and we're losing cattle and – yeah you see that every day like I suppose it's that whole – they talk about 'cotton wool kids' now. Yeah, like they're so protected. I mean if I had kids in the city I'd be absolutely terrified. I want to have my kids in the bush. It's just, they see everything but, they learn about death and everything has to die and unfortunately they won't always survive and, yeah, I mean it's sad like you can't block it out, it is a sad event, but it's part of life, you get used to it I suppose. (Mimi)*

> *Where you've got livestock you've got dead stock. We have to put animals down and we lose animals and townies can't even kill a rooster to eat. Someone has to do it. ...I think I'm in touch with my mortality. I've never minded considering the hereafter and the fact that I will die some day, not that I'm looking forward to it. (Mark)*

Living on the land and being faced with the remoteness, isolation and harsh environment added to participants' capacity to deal with adversity. Participants felt that being connected to the land meant having the ability to be self-reliant, practical, innovative and tough. Resilience was seen to be a key component of survival on the land. Participants described their experiences and gave examples of how their situation compared to that of city folk:

> *When something happens* [in town] *straight away you go to the doctor or you go to the neighbours. I don't have any neighbours. My mate he lives down the back, but over the road it's about eight kilometres. That's the only neighbour I've got but I like it that way. …There is always something* [that can happen] *but I rather be there* [on the farm] *than sitting here in* [town] *when you can't do anything and I'd rather be there dealing with it in my own way sort of you know. (Grant)*
>
> *Because you're not five minutes from being able to get bits and pieces that you need and so you make do. (Sue)*
>
> *I think the second one is quite possibly because you've come from the bush you might tend to be a little more practical because you've had to do things for yourself and you've had to make your own, you know, so – and there's nothing like being practical to sort of get you out of problems. I think also being on the land makes you a bit more individualistic so you tend to say, "Well, I know I've got a lot of mates and family helping me out, but it's up to me" you know what I mean? (Ben)*

This capacity to be resilient, learnt from years on the land, was important post-cancer. Three participants made special reference as to how they had to carry on with their normal lives, and work, post cancer treatment. There was no time to sit on the couch and recover as participants had to keep going to maintain the farm. Life on the land did not stop because they had cancer, particularly for the men in this study, who felt that not getting back to farming work was letting their family and their business down. This necessity to keep working, which could be viewed as creating additional hardship for the cancer survivor, actually had some benefits for these participants. Grant, John and Tom described:

> *You've got to keep things going. They don't stop because you're sick. The cows want to get fed and the chooks and the dog, he wants to play and…Take your mind off things you know. (Grant)*

> *I just come home* [following cancer surgery] *and carried on as though nothing – you don't let things worry you. You come home and carry on as though nothing had happened. (John)*

> *Yeah well I mean I go out on the tractor and so forth and if I got tired I would just shut it down and go and have a sleep. One day there I must have been a bit more tired than usual and any rate I stopped the tractor but it was still running flat out, bloody air conditioned cab, and the neighbour come along. "Oh God" he said, "He's dead."* [laugh]. *(Tom)*

However, for Keith and Anna, living with the diagnosis of cancer prompted the realisation that a change in their approach to life was needed. Instead of working around the clock and being a slave to the land, they developed a more relaxed attitude to enjoy what they had and spend more time doing the things they loved. Being connected to the land was not only a matter of being a caretaker, but also being taken care of and these participants recognised the importance of this. Keith and Anna talked about their change in attitude:

> *Not long after I come out of hospital, one morning I don't know why, for what reason, I was jogging down to the piggery you know, "Down there and get it done." And I thought, "What in the hell am I running for?" And from that day on I don't know why or for what reason, something just clicked in the brain and said, "Hey you don't have to do that. 'what are you flogging yourself for?" …Now we take a bit of time off, as I say, have a look around and we're still on top of it. (Keith)*

> *People they just get so caught up – we get so caught up. Like my husband, I think my husband is a dickhead because he just works seven days a week and everything for his retirement and I keep saying to him, "What if you don't get to retirement? What if you drop dead?" Work is a means to an end, it's not your life, I don't believe. See you get clarification in all those sort of areas when you get like this. Honestly it has and a lot of it has been good because* [pause] *um, what happens is your life becomes more intense because you don't know – maybe next time I go* [for a check up] *I will have some bad news, so the truth is you tend to sort of value things much greater than you did before. (Anna)*

Unfortunately for several participants their cancer did impact on their ability to return to the activities they once loved as part of their work on the land. Attempts to ignore the physical consequences of their cancer did not last with the painful realisation of having to withdraw from much loved activities. This was often recalled with much sadness as riding tractors and horses and getting fully engrossed in one's work were some of the many activities these participants cherished and were an important part of their connection to the land. Sam said:

> *I started driving tractors when I was 12 years old working this ground and I still love doing that but I can't. It plays up with my stomach too much. I still love getting out there mowing lucerne and raking lucerne and bailing hay but I can't any more. (Sam)*

Ben made particular mention of how he missed not being able to ride his horses out in the bush any longer due to his cancer operation. He became quite emotional when sharing this as riding had been such an important part of his life on the land. He said:

> *I mean one of the things that I have missed, but I've closed my mind to it is that I was forbidden to ride a horse and not so much the fact of not being able*

> *to ride a horse, is there's nothing more liberating than being in the bush on a horse. You see everything; you haven't got to guide the horse. (Ben)*

Despite the unrelenting nature of the land and some the tough lessons participants had to endure, the next section ' I really think it has got healing properties' discusses how participants perceived their connection to the land in relation to their post cancer journey – a phase of healing.

5.6 I Really Think It Has Got Healing Properties

Study participants provided numerous examples of how their connection to the land became a valuable source of healing through and beyond their cancer journey. These participants tapped into a familiar source – nature – and drew strength, refuge and healing from the land during their cancer survival journey. Participants believed that spending time outdoors, such as in the garden or in the bush, was healing for them. \In some instances, participants related that they could not wait to get home after their cancer treatment and be outdoors and tend to their gardens.

One participant, Keith, spoke of his experience during his hospital stay. He was initially placed in a room with no window, but was shifted to a room where he could see outside:

> *Well for the first two days* [in hospital] *…the first room I was there for two days and she* [the nurse] *said, "Whatever you do for the first two or three days, even if you're not in pain, take the pain killers" you know the first day I did, the second day I thought, "Well, I was right." And then they shifted me down to another room of which we could look out and you looked down across the seam of the trees and everything else and I found it just felt totally different. You could see out, you could see something that was in touch with you. You could watch the birds fly around in the trees and it was just, yeah, so much more. The first couple of days we would go out in the garden and have a sit – you would sit out there for a while. (Keith)*

Some participants felt that their connection to the land actually deepened post cancer treatment, and being outdoors became a form of therapy rather than just a pleasant place to be.

> [On return from treatment] *I stumbled into my garden and crawled around on my hands and knees and grew vegetables. I used to walk a fair bit. Yeah, the solitude, just commune, commune with nature. (Ben)*

> *As soon as I got home in December I said wanted a veggie garden. …Why would I have been drawn to it when I was at my lowest ebb in life?. …I just think it* [the garden] *has got healing properties in that you are dealing with something that grows and sort of in front of your eyes you can see things changing week by week and sometimes day by day and I believe that that is healing for me. For some reason it gives me – like I can feel down and I just go out and turn the hose on or go out and sort of plant some seedlings or water and, you know, yeah it takes my mind off it. I don't know, maybe you see, you always see that something is there that you can do. … And by just doing things time just passes and before you know it you've been out for an hour doing – and it's quite astounding, but I really think it's got healing properties. … So you feel like you are doing something and it is therapeutic. I mean people were telling me that before, that it is a therapy to be in the garden, but it took me 'til I was 53 to work it out… I think I always had an appreciation for nature. I didn't realise how much I've come to depend on it. You know I think I depend on it and that's why I'm drawn out there too because I need it for my peace of mind and my healing now. (Anna)*

The following accounts from three participants illustrate their appreciation for the different natural environments such as going to the ocean or camping on the river bank. Taking time to connect with nature gave Jules, Leanne and Anna sense of rejuvenation, tranquillity and healing. During the interview Leanne mentioned her need to soon head off again to go camping in the bush in order to have time alone and have a break from the mundane aspects of everyday life. This is what the three participants expressed:

> *Yeah. I like to go to the sea. I love the sea air, it just makes you feel so healthy, it's so invigorating. I do love the garden; I love to have my hands in the dirt. I do feel an affinity, a connection to the land in that way, and also it's just completely restorative. Meaning that all too often we are 'busy' with*

> *activity that is unimportant by comparison to the benefits of taking oneself to where there is no distraction from moving through or being still, smelling, touching and seeing natural surroundings. It's all too easy to just hang around and there are things to do and forget that it would be wonderful to get out to the National Park, for example, or just go for a walk along the creek and to forget how rejuvenating that is. (Jules)*

> *Um, just the environment itself. The peace and the quiet and the tranquillity. Mm, it plays a part in it, yeah. Yeah you go down to the river or go camping. I need some R&R, I'm due for some R&R. I've got to go camping again. I actually did travel for a while when I got real – I was real sick. ...Yeah and I just travelled. I ended up out at [town]. Camp on the river at night time. You own the night. It's just you and the night. Yeah and nothing can get you, nothing can get you. Yeah but there's nothing to fear but fear itself. (Leanne)*

Animals played a significant part in the daily lives of some participants as well as during their recovery phase. These animals were mostly companion animals such as dogs and cats. It was noted that when visiting participants' homes to conduct the interviews, almost everyone had some pet/s and many were introduced as a 'family member'. The participants told stories how their pets kept them company during times of loneliness, shared their bed when sick and were unquestioning listeners:

> *Love the animals. Yep, they play a big part. Well when I was a kid the only mate I ever had was a dog. (Tom)*

> *Yeah we've got the dog and a cat and the cat is sort of my little – I talk to the dog and I talk to the cat because I spend a lot of time on my own. You know my husband goes out and does his thing and he's at a meeting today and he's going away for three days so I talk to my animals but I don't actually mind if people catch me talking to the dog or the cat. (Anna)*

> *I take the two boys* [the dogs] *– we've got a dam down the back, but even prior to me getting sick, if I had a bad day I would just put the joggers on and go for a jog. You used that as a way of unwinding, relaxing, putting a lot of different thoughts through your head and you would come back, then you wouldn't come in and fight with the cook or go crook at the kids or anything and it would be all gone. (Keith)*

> *Yeah you get attached to your animals and they're very calming too. We did have a cat that was, yeah, used to come and sit on the bed when you were sick. (Mimi)*

> [On return from treatment] *I would just get around, go for a walk around with the dogs and so forth and you know just relax. After being cooped up down there* [major city] *for five days and so forth well it was just good to get out in the fresh air and exercise and so forth. (Tom)*

One participant chose not to have any more pets due to the stress of losing them and another described the difficulties of finding someone to look after them when he was sick. Even though they both liked animals, they recognised that animal ownership can have unwelcome consequences. Jules and Grant remarked:

> *As people who have pets, there comes a time you mention having to have a dog put down, I've had to do that too and it was awful. I thought, "I don't want this kind of responsibility. I don't want to play God." (Jules)*

> *That's where the hassles started when they told me I've got cancer and you've got to find somebody to feed them and look after them and the chooks and the dog and cows and you know. (Grant)*

As much as animals played an important part as a form of therapy, several participants had been drawing on the healing powers of plants. They strongly believed that the use of naturally derived products or ‘bush medicine’ had made a helpful contribution to improving their health. Two of the participants became particularly interested in the use of alternative medicine following their cancer diagnosis. One of the participants, Greg, felt that not enough research is being conducted into identifying the potential healing capacities of bush medicines. Despite being aware of the surrounding controversy, if these products are indeed helpful, participants felt that it had been the right choice for them:

> *And before* [cancer] *I used to always crave for watercress. Yeah and you know I always eat it – want it – go to the creeks looking for it. But since* [cancer treatment] *it doesn’t matter. I still go and eat it like when I’m about but not – you know I don’t sort of go looking for it. I don’t know what’s in it, but a cow down at* [town] *where my nephews are was sick and that cow went up the creeks eating the watercress and got better. There is something in watercress. (Rick).*

> *I told my cousin I had the operation she said you want to get on to Gumbi Gumbi and I said, “What’s that?” And she said it’s a medicinal tree and, of course, the Aboriginals have been using it for years. … I’d never have chemo or radium not once I’d been on this* [Gumbi Gumbi]. *I reckon it’s not worth the hassle. I can’t believe it’s around and there’s no research done on it And this is what disappoints me, no matter who you talk to, a nurse and a doctor – they just clam up and don’t want to know you. It’s only through experience that you’ve got a bit of evidence but then again if you don’t research it properly you’ve got no proof. (Greg)*

> *I came across a couple of books. One was ‘World without Cancer and the other one was ‘Laterile Vitamin B’. The strongest source of it* [Laterile] *as I understand is apricot kernels. So I scratched around and the best I could do*

> *was get – what do you call it – apricot kernels. And that started to make sense to me so I buggered around and I found out that if you ate about a dozen of these a day you wouldn't get poisoned* [laugh]*. And in the complete absence of any other information, I used to eat a dozen of them every night with a handful of sultanas which I came to quite like. They had them for a long time and then they disappeared off the market, but apricot oil became available. So now every morning on my muesli I have a tablespoon of apricot oil. (David)*

Healing and recovery following cancer treatment was an important factor for all participants and it is clear from their comments that being in the garden or at a special place on their property, with their pets or enlisting the help of alternative therapies had been perceived as beneficial in their survivorship journey. Participants tapped into a familiar source – nature - for support during times of need. Their connection to the land however also signalled a close connection to the people who shared their rural environment and the following theme 'That's what country life is about' gives an insight into this connection and how community support impacted on the lives of the participants particularly during their cancer journey.

5.7 That’s What Country Life Is About

Part of everyone’s connection to the land and living in a rural community was sharing their lives with others. For many participants being connected to the land also meant being connected to their fellow humans and participating in what is commonly known as ‘the spirit of the bush’. Rural people living in close knit communities are renowned for looking out for each other and giving a helping hand, however this became even more apparent when the participants were moving through their cancer journey. Very few participants felt that living in a small community, where privacy can often be an issue, was a problem for them. They felt grateful for the visits, helpful gestures and practical support which helped participants physically and emotionally through and beyond their cancer journey:

> *I think I had absolutely wonderful help and support. And like I could have had Meals on Wheels and I could have had everyone cleaning the house and God knows what not. (Eve)*

> *For me I couldn’t have been in a better place because I’ve got all these people living around me and here to support me but without sort of being in my – being too much. They would give me a call on the telephone and chat with me and see how you’re going and I don’t think in the city that I would have had the same support as I’ve had out here. The people at my church, well I mean they were wonderful too and the minister’s wife used to come out every month or something for a visit and they always kept me in their prayers and kept up to how I was doing and everything and always very encouraging And I think that’s what country life* is about. (Anna)

> *People from* [country town] *would come down to* [major city] *on business and they would come and see you in hospital. Well you couldn’t let them down could you? You know what I mean like? But you’ve got these people in* there rooting for *you so you’re not going to give up are you. (Ben)*

> *Oh, just having the support of your family because there wasn't the cancer support there or the Blue Care or any of that type of thing in those days so it was so important to have your family and then friends and things like that. (Sue)*

When asked if the privacy issue bothered the participants, most were not concerned about it. They felt that the support given was not intended to be intrusive but rather was an expression of their caring and support, even though sometimes the support could be a little overwhelming:

> *Yeah and it wasn't so much as they were diving into your privacy it's just everyone cared. It's like a big community that just cares. Oh, my God, you should see the people that come here to see me. ... The amount of people that come here to see – just between me and you, they're a bloody nuisance so I can't get any work done. (Sam)*

> *It was just like they knew that I had it and I mean my Dad is pretty private, but yeah like they never were intrusive or anything. They just you know, if someone saw Dad down town, "Oh, how are you going? You know if you want me to have the kids I can pick them up or whatever." So it affects absolutely everyone around you but the good thing is I think in a small rural school everyone knew, so like all my friends knew and so everyone's really supportive, like you know the old casserole* [laugh]. *But I suppose it's also that protection thing too like in a community. That kind of protectiveness from the whole community of the family and caring. (Mimi)*

However, four participants did discuss the problems they faced in relation to privacy and isolation. This was particularly apparent with participants who were not 'locals' and had limited community links. A breach of privacy was often found among family and friends which was disappointing for some participants. Having access to information and professional support was also noted by a number of participants. These were some of their concerns:

> *"I feel sorry for you, we're thinking about you." You say, "Well that doesn't help me you know."* [laugh]. *If I didn't have* [partner] *I would have given up. Because nobody else cared. Oh well you see people in the town here, "Gee I haven't seen you for a while. You're getting fat." "Oh well it's just the medication and all the side effects you got from it, pills you have to take so you blow up." (Grant)*

> *Some communities are more of a hindrance for people. They can be more of a hindrance than a help. ..Um, you're isolated. Isolation is a thing. And not knowing who to talk to, who to reach out to. You know and if you haven't got medical support you can forget it. (Leanne)*

In relation to privacy issues Jules talked about her careful selection of whom she discussed her cancer diagnosis with, but Mark, who tried a similar approach was disappointed with the results:

> *It was almost impossible to keep it to myself. It was something that I told selected people and I would not have told somebody who I thought would probably go and immediately tell everybody within a 10 km radius. So, yes, I was careful about whom I told and I didn't talk about it a lot to people. I felt fairly strong really – I guess if I'd needed to talk to a lot of people about it I would have done and I didn't, so obviously the need was not there I think. (Jules)*

> *I don't know whether this is relevant or not, but I class myself as a private person. I, um,* [pause]… *And I asked them* [family and friends] *to treat it as confidential. And I was horrified at the result. They didn't respect it at all. And that – I found that bad. And so I suppose the trouble is that when you tell*

> *somebody something you lose control of it. You now are subject to how that person handles information. They can not tell anyone; they can tell just about everyone, they can even butter it up a bit. They can change it and they do and even if you ask them not to and it's family, as well as very close friends I told, about three, – family was the worst. (Mark)*

A number of participants, who had moved through and beyond cancer with the support of the community, wanted to give back what they had received during their time of need. They felt the best way to do this was to become a support person for other cancer sufferers. They reported that the impact of their cancer experience had left them with a changed philosophy on life. In some cases participants said that having cancer had led to positive changes in their lives, and they felt it was important to share this positive message with others. For these rural (or ex-rural) people, this was perhaps a continuation of past behaviours, as helping others when things get tough typifies the spirit of the bush.

> *One of the interesting things was I didn't find I needed counselling. That left me cold. I had a few people try to counsel me a bit but it did nothing to me because I just didn't need it. But I have done a little bit myself since, not officially or anything else but sometimes I help in the hospital with some guy who won't live with his* [colostomy] *bag or something and they give me a whistle and I go up and talk to him. (Ben)*

> *I have been [helping others] for a long time, yeah. Well, it's a big part of my life these days, it's being part of the Cancer Council….I have plenty of cases, sometimes more than what the breast cancer individuals have with other cancers. Time and time again I know that they haven't been given the books that I know are available to them through the Cancer Fund and, you know, I take them and "Oh, I didn't know this …". (Sue)*

Participants sought to share their positive outlook which they held despite the adversity of living with a cancer diagnosis. They wanted to help others to realise that a cancer diagnosis provided the opportunity for self-reflection and a renewed outlook on life. Being faced with the possibility of dying from cancer, and having survived in some cases several recurrences, has profoundly altered the life path for these participants. The worry of cancer returning remained with them; however participants were committed to maintaining a positive outlook. To the onlooker, these thoughts are inspirational:

> *I had a hell of a rough road for a while, yes, which I think is one of the big things that people who are getting over cancer have got to learn. We want everything tomorrow and I mean it was three or four years before I got really going and it was – you know even 10 years. (Ben)*

> *The cancer was just the last straw; you know the famous last straw. The thing that clarifies every aspect of your life….Who knows how much that was a catalyst for my beginning to think more broadly. More in – yeah, out into the wider community, like into the community of the planet rather than just my house. And I think that this thing that we call life and this state that we call living and this thing that we call being is just such a profound mystery that if I really take the time out from everything else to concentrate on it and think about it, I almost think – well, you know it's true to say that each of us is the centre of our universe, because when we cease to be, the universe ceases to be for us, at least in relation to us. (Jules)*

In conclusion, this chapter has presented the outcomes of the thematic analysis, which generated seven themes. These are representative of the 17 participants' experiences of living in a rural setting and how their connection to the land has accompanied them throughout their life's journey. As illustrated by the many accounts provided by the rural men and women in this study, feeling a strong sense of connection to the land has been an important part of their lives, not only during time of wellness but also during times of health adversity.

The following chapter, ‘Interpretation and Discussion’, will now consider the findings from this study in the context of existing literature. This serves to identify where this research is congruent with current evidence of other researchers, but also to demonstrate knowledge that has not been discussed in the literature thus far and represents new knowledge.

CHAPTER 6: INTERPRETATION AND DISCUSSION

An Italian humanist and poet Petrarch (cited in Bynum 2001, p.21) noted six centuries ago that ‘if a hundred, or a thousand people of the same constitution and illness were divided into two groups, one under medical care and one entrusted to nature, the latter would show more cases of recovery’. Although this research study does not seek to undervalue the importance of medical intervention, it seeks to gain a deeper understanding of factors beyond medical intervention that may contribute to cancer recovery for rural men and women.

The focus of this dissertation was to explore the complexity of human interaction with the natural environment, not only on a day to day basis but also in the context of health adversity. This chapter, which interprets the data gathered from the participants in light of previous theory/knowledge, is framed around the research questions for this study. The initial point of interest was to gain an understanding of how rural Australian men and women perceive their sense of connection to the land. The second point of interest was to explore how rural men and women with cancer report their survivorship journey in the context of their sense of connection to the land. Given the interconnectedness of these questions, it is important to note that the data relating to the two research questions posed for this study are inter-dependent, as the experiences described by the participants regarding their sense of connection to the land, frequently moved across the health-illness continuum without clear demarcation.

6.1 Physical, Emotional and Spiritual Bonds

According to Martin (2004), integration with nature is often signified by a sense of oneness, where caring for nature is pervasive and nature is perceived as a sacred place in which a person feels a sense of spiritual connection.. The following section will discuss the participants' physical, emotional and spiritual bonds with the land and the pervasiveness of this connection in times of health and illness.

During the recruitment phase of this study, one critical aspect of the selection criteria was that participants reported a strong sense of connection to the land. At the commencement of each interview, participants readily identified the strength of their feelings in this regard. Yet once the interview process started and participants were asked to describe their connection, many felt challenged to answer this question. Several participants noted that this was something they had never really tried to analyse or describe in detail before. They 'just knew' they felt that way about the land. Simply, they were 'lost for words'.

As discussed in Chapter 3, language and dialectic processes form the basis for the creation of meaning of our world (Guba & Lincoln, 1994), but according to Martin and Thomas (2000), Western culture lacks the words and history to describe the human-nature connection. This contrasts with other cultures, such as Indigenous cultures, which have a specific language around their connection to the land. One example would be that of the Australian Aboriginal culture and the use of the English word 'country'. Deborah Bird Rose (1996, p. 7) explained:

> Country in Aboriginal English is not only a common noun but also a proper noun. People talk about country in the same way that they would talk about a person: they speak to country, sing to country, visit country, worry about country, feel sorry for country, and long for country. People say that country knows, hears, smells, takes notice, takes care, is sorry or happy. Country is not a generalised or undifferentiated type of place, such as one might indicate with terms like 'spending a day in the country' or 'going up the country'. Rather, country is a living entity with a yesterday, today and tomorrow, with a consciousness, and a will toward life. Because of this richness, country is home, and peace; nourishment for body, mind, and spirit; heart's ease.

Drawing from the detailed description provided by Deborah Bird Rose on what country means for Aboriginal Australians, it is evident that many of these elements can be found in the accounts of the participants. Because of the many complexities of Indigenous people's connection to the land, this study does not seek to draw comparisons between Indigenous and non-Indigenous peoples in this regard. However, this study does demonstrate that a sense of connection to the land can be of substantial importance to the health and well-being of non-Indigenous people. Geschiere and Gugler (1998) and Stoll (1989) asserted that the intimate connection between health and land is a symbol shared by people universally and it is an essential human need to draw nourishment from the earth. This notion is verified by the comments made by the participants when describing their longstanding and intimate bond with the land, in most cases experienced since childhood. They spoke about 'being part of the land', it 'running in their blood' and described 'a bit of them being in every clod of dirt', thus identifying closely as being part of, not separate from, their environment. The participants' sense of being 'one' with nature is a very significant aspect of this study. It is an integral part of their existence and impacts across many aspects of their lives; therefore forming the basis for much of this discussion.

Upon reflection on the discussion held with the participants, it is evident that their connection is not just a mere physical presence in the environment but something that they feel is embedded in the physical manifestation of their bodies, such as their blood or DNA. In fact some participants spoke about their European farming heritage, saying they believed that this gave them a genetic predisposition in their passion for farming. More importantly, it was felt that this connection was not only bound to a particular piece of land (even though some participants' families had been on a particular property for many generations), but was able to transcend physical boundaries across the continent, where the love for the land continued.

All the participants felt proud of their longstanding connection to the land and saw it as much as a choice of lifestyle as well as a place they felt compelled to be. According to Moffat (2008), farmers choose living on the land as they enjoy the bush and find it an ideal place to raise their children, but this study extends this notion beyond the concept of living on the land purely as a chosen way of life. Living on the land meant being in constant contact with the natural world, a place all participants felt they instinctively belonged. This finding may also help to explain why some farmers continue to persist with farming in the face of extreme adversity rather than to leave the land. It may not be just a simple matter of choice to leave the land, but rather would involve a substantial personal loss and life crisis. The intensity of the participants' feelings for the land was palpable during the interviews and this was at one level surprising, particularly in view of the limited evidence available describing rural people's sense of connection to the land. However, on another level, it was not an unanticipated finding, given my own understanding of the human-nature connection as an essential and universal phenomenon.

Another important aspect of the sense of connection to land described by the rural men and women in this study is that it is not a unilaterally positive relationship. For many the land is their 'kingdom' and a place of solace during times of stress, but participants also pointed out that their connection is reciprocal; the land gives to them what they give to the land. Pedretti-Burls (2007) asserted that the need for humans to interact with nature is not just based on material exploitation of the environment, but is important for our emotional, cognitive, aesthetic and spiritual development. Fitzgerald, Pearson and McCutcheon (2001), also found that the affinity many rural people have with the land is not only economically driven but results from a spiritual connection and the strength drawn from it. Similarly, this was the case for the participants who spoke about the benefits and challenges of living on the land beyond earning an income, where the land was perceived as a teacher, a saviour, a provider and a healer, yet could also be unrelenting, harsh and unforgiving in nature.

The unpredictability of nature was accepted as part of living on the land and in fact was seen by the participants as increasing their ability to deal with adversity. This finding is congruent with evidence in the literature on the stoicism, self-reliance and resilience of rural communities (Alston & Kent 2008; Beard et al. 2009; Centre for

Rural Mental Health 2005; Fuller et al. 2000; Hegney et al., 2007; Judd et al. 2006; Rogers-Clark, 2002). While stoicism and self-reliance within rural populations is frequently reported as a barrier to aspects of the health and well-beingof this group (Alston & Kent 2004; Fuller et al. 2000; Judd et al. 2006; Wainer & Chesters 2000), participants viewed their hardiness as a positive and essential part of their connection to the land.

In some ways the participants' response to natural adversity mirrored that of nature, as can be witnessed in the remarkable regeneration of the bush after a fire or a flood within a relatively short time. Just as the land is subject to great adversity and conditions that can cause damage on a big scale, all the participants experienced significant adversity to their health and well-being through cancer. However, living on the land meant getting on with life and dealing with issues often without assitance, and this was not always perceived as problematic. For instance, Grant commented:

> *You've got to keep things going. They don't stop because you're sick. The cows want to get fed and the chooks and the dog, he wants to play and…Take your mind off things you know.*

When considering the individual aspects of the participants' sense of connection to the land, interaction with animals played a vital part. As in the previous quote provided by Grant, animals gave purpose and for many enriched their lives. Almost all participants I visited had at least one pet of some sort and many spoke of their close relationship with their animals, such as dogs, cats and horses. The benefits of pet ownership and therapy for people of all ages are well established in the literature (Cole et al. 2007; Daniels 2008; Martin & Farnum 2002; Vining 2003; Williams & Jenkins 2008) and this has also been demonstrated in this group of participants. Dogs and horses were not only perceived as useful for their daily work on the farm such as mustering sheep and cattle, but were companions during many lonely hours of working in the bush. One participant described his childhood dog as 'the only mate he ever had' and another participant explained how much he used to love riding his horse through the bush. The company of animals was always tolerated and sometimes even preferred over human company, particularly during times when participants felt challenged by their cancer diagnosis. For instant Keith talked about how he would take the dogs and go for a jog when he was feeling stressed and by the time he came back, all the stress was gone. This was his way to avoid 'getting crook' at the kids or staff. Unlike much of the presented evidence in the literature where pet therapy is a deliberate and organised activity, the participants in this study were intuitively drawn to their animals. It would seem that the animals were a source of help on a number of levels. Their unquestioning acceptance, unconditional presence and simplistic needs made them formidable companions in times, when the participants were trying to deal with the complexity of their lives.

As noted previously, participants articulated how they learnt from the land by being observant and honing their skills to sense any changes in their environment. Animals (wildlife as well as domestic animals) were often the source of important information, such as the alarming sounds of the birds indicating the presence of a snake. Crist (2004) explained that being attuned with nature is a sense developed over time and some of this is evident in the study findings. Spending many hours outdoors provided participants with the perfect opportunity to interact with and observe nature in great detail. For example, Mimi spoke about her experience of sitting quietly in the bush, observing and listening to what was happening around her, such as the sounds of the cows or birds. More importantly she spoke about being able to 'sense' potential changes or dangers. Crist (2004, p.9) asserted that not everyone receives meaning from the natural world in the same way and that understanding depends on 'whether they are equipped with pertinent knowledge, relevant training, prior experience, tuned awareness, passionate interest and attention to the breadth of understanding, care or sufficient self-cultivation', aspects which were easily identifiable in this group of participants.

Understanding and ‘listening’ to the bush was an important aspect and skill of the participants’ sense of connection to the land, which in some cases had been taught by their parents or friends, but in most cases, had developed naturally. A heightened sense of environmental awareness allowed them to live in a potentially dangerous environment more safely. In fact, these skills were needed for their basic survival and self-preservation. As much as the participants loved the land, they were also acutely aware of its dangers and their connection and intimate relationship with nature helped guide this interaction. As one participant explained:

> *You’ve got to roll with the punches and you’ve got to live with nature. Not fight nature. There’s people who fight nature and get into trouble. I mean she’s a pretty hard task master.*

In acknowledging the dangers of their life on the land, participants were also acutely aware of their own mortality and limitations, particularly once faced with their cancer diagnosis. All the participants in this study portrayed a strong sense of survivorship, by ‘fighting’ and managing their cancers as best as possible and getting on with their lives. For some, this happened as time progressed and they were eventually cancer free and fully recovered, however for others their cancer will continue to affect their lives. The majority had reached the stage of ‘permanent survival’ and according to Marcelle Kaplan (2008), this stage offers the prospects of an extended disease free survival with low likelihood of recurrence, and adjustment to the altered self. However, some long term physical effects may continue.

These findings are congruent with the experiences of the majority of the participants, as typically none of the participants mentioned a fear of death; but several felt disappointed that their cancer prevented them from doing the things that in many ways exemplified their connection to the land, such as riding a horse or spending many hours on the tractor working the fields. These physical limitations forced some of them to retire, as their energy levels and physical limitations did not permit them to continue working on the land. Ben, for example, when speaking about not being able to ride his horse in the bush, became quite emotional. Their physical losses also meant a considerable loss of their physical connection to the land, which for some participants created more sadness than the prospect of dying.

As discussed previously, fear of death was not a major concern for some participants and just like many other facets of their lives, philosophies about life and death were derived in relation to being in tune with nature. Living on the land and being a keen observer of the cycle of life had provided important insights for the participants. Life and death were perceived as realities of farming life, something most of the participants had learned to deal with since childhood. Mark, who has been a farmer all his life, talked about the fact that when you deal with livestock, you also have to deal with dead stock. He felt he was very much in touch with his mortality and was not afraid to consider the prospect of dying. In some way, participants expressed a sense of spirituality based in their connection with nature, however for others this was extended to their faith in a higher being.

According to McEwen (2005), a belief in a supreme being, an appreciation of nature and a sense of connectedness with others and the universe are some of the characteristics of spiritual well-being. Being in the midst of nature meant being closer to a higher force and as one of the participants, Georgia, simply put it, she just wanted to have some quiet time outdoors and talk to her creator. Kaplan and Kaplan (1989, p. 197) in their work described how a spiritual connection to the natural environment can evoke a ‘remarkable sense of feeling of being at one with nature’, and this has certainly been demonstrated by the majority of the participants. It is of importance to note that despite multiple descriptions in the literature on what constitutes spirituality, connection to land is not commonly included. There is also little evidence of how this actually manifests itself in the daily lives of people; however this study has provided some insight in the context of the rural men and women who took part in this study. This is significant insofar that it demonstrates a perceived level of spirituality in relation to being connected to the land for the majority of the participants, a concept often only attributed to Indigenous populations.

6.2 Caring Connections

Understanding what it means to survive cancer long term is difficult for anyone who has not been in this position. Undoubtedly each person's survivorship journey may cover a diverse range of physical and emotional experiences, and asking people to reflect on the complexity of this journey is not an easy task. All participants were at least one year post their acute treatment and the majority had been long term survivors. Upon reflection on all of the 17 interviews, one interesting observation is that the participants spoke in general more about their sense of connection to the land and less about their cancer experience.

One possible explanation for this observation is that time has created some emotional healing, and the experiences were less raw. This was particularly evident with participants who had been very long term survivors (>5 years). Another rationalisation may be found in the often reported stoicism of rural people and their ability to 'get on with it' (Alston & Kent 2008; Beard et al. 2009; Centre for Rural Mental Health 2005; Fuller et al. 2000 & Judd et al. 2006). Many of the participants spoke of the importance of being mentally adjusted to rural living, and that life had to continue despite their cancer diagnosis. For instance, John said that when he got home following cancer surgery, he just carried on as if nothing had happened. These findings are similarly represented in the study of Rogers-Clark (2002), where rural women spoke of the need to continue working on the farm as opportunity for rests were few. Yet I would argue that the ability of rural people to be resilient in the face of cancer is more than just an expression of stoicism. Their connection to their land is embedded in a strong sense of caring responsibility for the family, the farm and the land, coupled with a feeling of wanting to be immersed in the natural environment. Therefore their desire to return to working the land following acute cancer treatment provides an important platform for restoring their sense of connection.

Developing one’s sense for the environment through a close human-nature relationship is critical in relation to human caring for the environment. According to Martin (2007; 2000; 1999) much of the human-nature relationship is embedded in how much a person cares for their environment and the relationship skills of the individual, such as knowing about nature; having trust in nature; interacting with nature and having concern for nature; all elements of which can be identified in this group of participants. The caring relationship the rural men and women had with the land was demonstrated in a variety of ways, such as growing a garden, and adopting land care practices as well as on a global level, by taking a stance on global environmental issues. The following section will discuss how participants were caring for their environment in their ‘backyard’.

Throughout the farming history in Australia and overseas, there have been times when maximising the short term productivity of farming land took precedence over the impact intensive farming practices were having on the environment. The farming methods of the first white settlers in Australia were drawn from their experiences as European farmers, with little recognition of the substantially different ecosystems (Pretty 2002). Many of these practices have caused land degradation and actual changes within the Australian landscape; however a significant shift is occurring and more emphasis is now placed on sustainable farming and preservation of the land (Barclay 2008; Moffat 2008). Long-held Indigenous beliefs and knowledge around the connection of caring for the land and in turn being cared for by the land are becoming a greater focus of current farming methods (Barclay 2008; Holmes & Day 1995), and this is evidenced by the comments made by the participants of this study. Their concern for good farming practices bore a deep caring for the land. Participants were acutely aware the impact farming was having on the land, not only now, but many years into the future. They felt that their role was that of a caretaker, someone who looked after and respected the land for the benefit of future generations. One example was given by Rick who talked about the importance of looking after the land, as without this level of care, farmers would not be able to survive on the land. He said:

> *I just- well I like to see the land being looked after... The ones that are going to be on the land are only the ones that can look after it because if they don't look after it they are not going to survive on it.*

6.3 Harmful Connections

A surprising finding of this study was the strong desire of the participants to talk about their thoughts on how the use of agricultural chemicals may have contributed to their cancer development. One participant in particular spoke about the loss of many of his friends from cancer and how he linked their extensive use of agricultural chemicals to their early demise. Some participants gave lengthy accounts of their exposure to agricultural chemicals particularly in their younger years (1960/70), at a time where use of DDT and Agent Orange was common and the need for personal protection was not recognised. It was not until later in their farming careers or post cancer diagnosis, that these participants felt that these now outdated farming methods were no longer sustainable and a change was needed. This shift in thinking closely aligns with Heron and Reason's view (1997, p. 12):

> There is an urgent need to re-vision our view of ourselves as co-inhabitants of the planet…..the current Western worldview has come to the end of its useful life, and, as well as some remarkable achievements in material well being and human possibility, has left us with a legacy of human alienation and ecological devastation'.

Heron and Reason's argument describes closely the view held by a large number of the participants who spoke of global destruction and their fear for the future of the natural environment. Interestingly, the impetus for this shift in approach was often coupled to their own cancer experience and the perception that the use of agricultural chemicals had not only harmed them but also the land they lived and worked on. It would seem that the participants' cancer experiences had heightened their receptiveness to the notion that their health and well-being was closely linked to that of their environment. For many, the diagnosis of cancer was an indicator that their farming practices were not only harmful for their land, but ultimately also harmful for them. In response, participants felt they had learned from their mistakes of the past and had adopted farming practices which were more in harmony with their environment, as well as being better for their own health and well-being. Once participants made those changes, it renewed and ultimately changed their relationship with the land by bringing about a sense of healing.

Given the concern expressed by the participants regarding their experience and view on the use of agricultural chemicals, another critical part of the discussion focused on the responses participants received from their health care practitioners upon sharing their concerns. A number of participants expressed their dissatisfaction with the information they had received from their health professionals and in some case felt ‘unheard’. For example Leanne spoke of her frustration of hoping to find someone who could help her:

> *Yeah and that’s been the battle, finding somebody to believe me. The minute I say I had chemicals on my hands, “Sorry.”*

Although the participants recognised that they could not change what had occurred in the past, they were looking towards their health provider to consider or validate their concerns. It is human nature to ask the question ‘why’? Why did I get cancer? What could have caused it? What could I have done to prevent it or what can I do to stay well in the future? It appears that for these participants it was important to have some discussion around their concerns. Wilson (2000) asserted that patients have ‘personal and even idiosyncratic ideas about causation and treatment’(p.204) and ‘recovery from illness will depend on individual beliefs, cultural support systems for patients, the influence and process of doctor-patient relationship, and biological factors’ (p. 207). Given the identified complexities of patients’ concepts of illness causation and influences to recovery, Lloyd added an interesting perspective with what he called the ‘lay-expert binary’ (2000). This binary occurs when lay people and researchers (experts) may interpret what they observe differently, and as demonstrated in the case of the participants, can lead to a situation where health professionals are not fully in tune with the needs of their patients.

As demonstrated in the above example, the concern for rural people around their health and illness experience may differ substantially from that of their city counterparts. Rural people, through their connection to the land, observe closely what is happening in their environment and draw knowledge from their observations. As discussed earlier, learning from the land is an important part of their survivial physically and ecconomically, and therefore it is not unreasonable to suggest that the particpants’ view on their cancer experience in relationship to the use of agricultural chemicals, has been validated by their observations. For instance, David spoke about the fact that he has hardly any friends left as many of them have died prematurely from cancer. They had all worked in the same farming industry and had been extensively exposed to agricultural chemicals. Given that the participants were aware of the fact that it was not possible to prove beyond reasonable doubt that there was a connection, what was important for them was that their concerns were heard, and ulitmately this was one reason why a large number of the participants wanted to take part in this study. Increasingly, with improving technology, people have access to health information and health professionals are no longer the ‘keeper’ of this information. Perhaps health care professionals need to be more aware of the issues pertinent to their patient group and respond in a manner that is supportive to their journey to recovery.

6.4 Healing Properties

> *The best remedy for those who are afraid, lonely or unhappy is to go outside, somewhere where they can be quiet, alone with the heavens, nature and God. Because only then does one feel that all is as it should be and that God wishes to see people happy, amidst the simple beauty of nature. As long as this exists, and it certainly always will, I know that then there will always be comfort for every sorrow, whatever the circumstances may be. And I firmly believe that nature brings solace in all troubles.*
>
> *Anne Frank (1929-1945), German Jewish Refugee, Diarist*

The above excerpt from Ann Frank's famous diary provides an example of how engagement with nature can provide solace during time of adversity. Despite the immense trauma Ann Frank experienced during World War II, her reflection shows that her connection to the natural world was an important source of strength for her. Anne Frank described nature as a 'remedy', a way to heal all ills and of providing comfort in time of need and despair. In many ways, her experience closely resembles the experience of the participants in this study. Being diagnosed with cancer caused significant life changes and challenges for these people. Within a relatively short time frame, they experienced changes to how their bodies looked and felt, how they felt emotionally, how they managed their work, how family and friends reacted and acted around them and how they planned their future. Yet unlike so many other facets in their lives, the one thing that did not change for the participants was the natural world around them.

People diagnosed with cancer experience loss on a number of levels. The loss of a part of their body due to cancer surgery, loss of control over the body due to invasive medical intervention or loss in the ability to trust the body to heal (Breaden 1997). Perhaps in the early stages of cancer survivorship, people may feel that that their bodies are no longer whole. Reason (1994) described healing as a process of returning to a state of wholeness and this occurs once a person is part of the world, instead of being outside of it. One of the most significant findings of this study is that all participants felt that their sense of connection to the land had impacted their cancer survivorship and although there is evidence of the healing properties of engaging with nature, thus far no study has been undertaken to explore this in relation to cancer survivorship.

Despite all of the participants having undergone medical treatment for their cancer, many of them chose to assist their healing through the use of alternative therapies. Gesler (1992, p. 735) asserted that ‘there is a long tradition that healing powers may be found in the physical environment, whether this entails materials such as medicinal plants, the fresh air and pure water of the countryside, or magnificent scenery’. Some of the participants actively sought out the use of alternative strategies, such as Australian bush medicine as well as other medicinal products. These participants strongly believed in the healing powers of these products and attributed their wellness during their survivorship journey to these products. Greg, for instance, was regularly using Gumbi Gumbi, which is a medicinal tree used by the Australian Aborigines. Participants, through the connection to the land, had faith in the products nature produces. Participants felt that natural therapies were complementing their traditional treatments and they felt that this was an opportunity to have some control over what they were taking, as natural therapies were seen less harmful than traditional cancer treatments. Admittedly, even though some participants resorted to the medicinal use of plants, the greater majority found great healing properties in the actual growing of plants.

For the rural men and women in this study, much of their healing journey occurred outside the hospital environment. They described how their recovery started once they returned home following their acute treatment and were able to connect with their environment again. Participants sought out spending time in the bush or their gardens in order to recuperate and replenish their energies. Ben illustrated how upon return from treatment in a major city he used to stumble into his garden and crawl around on his hands and knees, feeling the soil and attending to his vegetables. Kaplan and Kaplan (1989, p. 190) asserted that just by going into the backyard to discover new buds on plants and ensure that all is well in the garden, the gardener can feel ‘quite distant from the world of pressure and obligations’, thus indicating that the natural environment provides a perfect opportunity to escape even if it is only the backyard. This study demonstrates strong links to Kaplan and Kaplan’s findings, and expands its relevance not only in the context of health, but also health adversity.

Growing a garden, access to water permitting, and particularly a vegetable garden, was a great interest of many participants. Even though the primary motivation for establishing a vegetable garden was to grow a supply of chemically free vegetables, for some this evolved into something far more, especially in the face of their cancer diagnosis. Participants, through their stories, demonstrated an intensification of their relationship with the land following diagnosis with cancer. For instance, Anna spoke about how she developed a passion for gardening when she returned from cancer treatment and she commented:

> *Why would I have been drawn to it when I was at my lowest ebb in life? I think I always had an appreciation for nature, but I didn’t realise how much I’ve come to depend on it… and that’s why I’m drawn out there too because I need it for my peace of mind and my healing now.*

Engagement with the natural environment became a sanctuary, a place to retrieve in times of stress and uncertainty, but also a place without demands, questions or judgement. In addition, the participants reported positive effects of touching the earth and feeling the warmth of the sun. Being outdoors provided opportunities to be fully immersed into a world where time just stood still and this provided a welcome distraction from pain and worries. For instance, Jules explained:

> *I do love the garden; I love to have my hands in the dirt. I do feel an affinity, a connection to the land in that way, and also it's just completely restorative.*

According to Kaplan and Kaplan, many physical and mental health benefits derived from the natural environment are a result of the restorative experiences (1989) and this is congruent with the findings of this study. The benefits of parks and gardens to health and well-being have also been well established in the literature (Field 2006; Frumkin 2003; Kaplan 1995, Maller 2008), therefore the participants' need to reconnect with nature is not surprising given that many had experienced some level of 'environmental deprivation' particularly during their stays in the major cities for treatment.

An analysis of the current psychosocial cancer research particularly in the area of dislocation of rural people for treatment (Clavarino et al. 2002; Martin-McDonald et al. 2003; McGrath et al. 1999a; McGrath et al. 1999b) revealed that much of the focus is on the distress experienced due to separation from the support networks of family and friends (Clavarino et al. 2002; Hegney et al. 2002; Hegney et al 2005). However, thus far no one has considered if removal from the natural environment could cause a similar distress. One of the participants, Ben, provided a vivid account on how it felt for him to be in a major city for treatment:

> *Well it* [the radium treatment in a major city] *was just like being a prisoner of war, you get what I mean. It was not my fault. Like if you're a criminal and you go to jail, you do the crime, you do the time, but stuck in bloody* [major city] *for seven weeks. Oh it was very soul destroying for a bushman.*

For the participants in this study, living on the land was not only about family and community, but a major part of their lives centred on their interaction with the natural world and a deeply embedded love for the land.

The findings from this study would suggest that being ‘dis-connected’ from the land was challenging for the majority of the participants and is one area necessitating greater level of attention when delivering psychosocial care, not only during the acute treatment phase, but also in the long term. A consequence of viewing health and illness within a scientific model is that there is a move away from some of the most fundamental aspects of human existence, our interactions with the natural world. For this participant group, being in touch with their environment has been an important part of their survivorship journey and contributed to enhanced healing. It is important for post cancer care to focus on helping people to feel ‘whole’ again. This is partly achieved through provision of booklets, regular check ups or visits to a counsellor, but perhaps there is some scope for health professionals to assist their clients to re-connect to their families, community and environment.

Another interesting finding of this study is that despite increasingly emerging evidence on how environmental changes can cause great level of stress to people (Albrecht 2005; Connor et al 2004; Sartore et al. 2005), the participants in this study, despite their personal stress of having cancer as well as dealing with the environmental challenges of their properties, still found a sense of solace in their natural environment. This is significant insofar as it presents a different perspective from the commonly illustrated image of farmers’ distress and despair due to environmental challenges. It appears that a person’s connection to land does indeed greatly influence their physical and mental health and well-being, both negatively and positively, however the positive aspects have thus far not been well explored.

As mentioned previously and demonstrated in the literature review, much of the current health research focuses on the problems people experience living in more isolated parts of Australia. When considering the literature on health and environment, the majority of research focuses on how environmentally adverse conditions such as droughts, floods, frost or fire has a negative impact on the mental health of rural dwellers (Centre for Rural and Remote Mental Health 2005; Hossain et al. 2008; Sartore et al. 2005). Notably there is an absence of research that considers the benefits rural living may hold. Despite the tyranny of distance, lack of services, tough environmental and working conditions, many people living in rural and remote areas would not swap their lifestyles. When looking at rural life as a researcher from a ‘metro-centric’ perspective, rural people indeed appear disadvantaged and often forgotten by governments; however participants in this study have demonstrated that there is a side to rural living that compensates for the lack of urban conveniences.

What appears to be an often ignored aspect is that a great majority of rural people choose to live on the land for a multitude of reasons. For instance, for some the farm has been in the family for generations, they have strong ties to the community, or farming is their chosen occupation. Participants frequently commented on the tremendous community support they experienced during their recovery and this aspect of rural living is well recognised in the literature (Gorman et al. 2007; Hegney et al. 2007). But what is less recognised is how much rural people appreciate the physical place they live in. Most participants in this study noted how much they enjoyed the rural lifestyle and if given a choice, would always return to the land. For instance, John described how living on the land is terrific and that there is no better life, as it is an independent and casual life style.

This may be a difficult concept to understand when considering the difficulties and challenges rural people face. Living away from large cities may be perceived by a city dweller as physically, culturally and socially isolating, but in comparison a person from a remote property may perceive cities as overcrowded, restrictive and exhausting. In order to better understand the health needs of rural people, it is important to acknowledge the differences in how people perceive their environment and how important it is to their lives. There is some evidence to suggest that people are willing to sacrifice some health treatments in order to stay in their rural environment (Craft et al. 1997; Kok et al, 2006; Mitchell et al 2006; Thompson et al 2007) and even though in an ideal world, all people would have equal access to health services, the reality is that the centralisation of specialist services in major cities will continue, not due to ‘anti-rural’ decisions, but financial viability. Perhaps a person’s decision not to choose a specific treatment option is not only made due to associated travel costs or having to leave work, but may also be influenced by not wanting to leave their natural environment, a place of strong physical, social, spiritual and emotional connection. In light of this, it is questionable if the practice of comparing rural-urban models of health care delivery serves as the best method in identifying gaps in service delivery to rural communities. Considering the uniqueness of living in a rural environment, it would appear that any proposed models of care need to be considered within its unique context and the sense of connection to the land of its community members.

When consulting the current literature on issues surrounding assisting people with cancer in rural and remote locations, lack of support services and access to specialists are often identified as major gaps in service delivery (Allan, Ball & Alston 2007; Alston et al. 2006; Australian Institute of Health and Welfare 2008b; Welch 2000). Evidence also suggests that, traditionally, rural people are reluctant to use support services due to issues of privacy and confidentiality as well as lack of trust (Gorman et al 2007; Wainer, 2000). Health professionals are well positioned to help and support rural people in their cancer survivorship journey; however this cannot be fully achieved without gaining the trust of rural communities and understanding the glue that makes rural communities stick. Understanding how people’s connection to the land may affect their health and illness experience is one way for health professionals to gain greater insight to assist their patients and this study aims to provide this insight. It is interesting to note, that despite good evidence recognising the strong link between health and well being and connection to the land for Indigenous populations (Goodall 1996; Johnston et al. 2007; Mehl-Madrona 2005; Pretty, Chipeur & Bramston 2002; Reid 1982; Wilson 2003), this knowledge is largely ignored for non-Indigenous populations. It would seem that acknowledgment of rural people’s connections to the land is important in advancing the delivery of appropriate care, as there is already supporting evidence on the negative impact of environmental influences on the physical and mental health of rural communities

(Centre for Rural and Remote Mental Health 2005; Hossain et al 2008; Sartore et al 2008). But it is equally important to draw on the strength of this connection and tap into its capacity to heal. In a world where we place a great deal of faith into a piece of technology, placing faith into nature appears primitive and backward, yet this connection has served humanity well for thousands of years.

6.5 Healing Health Care

Based on the information provided by the participants and gaining a deeper insight into how important their connection to the land was, I questioned how current models of health care meet the needs of people who have a strong connection to the land. Having worked in a large regional hospital environment, I have often contemplated how I would feel being a long term patient. A rehabilitation patient, for instance, could be in hospital for many months, with limited or no exposure is to fresh air and sunshine. Patients who are immobile are confined to a ward with artificial lighting, air conditioning, sparsely furnished rooms with bare walls and windows that may only look out onto other buildings. Hospital grounds are often taken up by buildings and concrete car parks, with few outdoor spaces where patients can sit in comfort. Nursing staff are often too busy to take patients outside and family members are worried that something untoward may happen if they do attempt to move their loved ones. In an attempt to bring ‘nature’ inside the hospital, visitors bring flowers to aid the recovery, although this may not be an adequate substitute.

Considering the information provided by the participants and their fondness of their outdoor lifestyle, it is difficult to imagine that such an environment could be conducive to holistic recovery. It is noteworthy however that it has also been my experience when visiting rural hospitals, that they are mostly situated within lovely, expansive gardens which may be reflective of their recognition that rural patients prefer to recover from an illness in such a setting.

Boredom, sensory deprivation, lack of sunlight and a feeling of confinement may well have a negative impact on the physical and mental health of the long term patient. Despite the fact that nursing prides itself in considering the importance of the mind-body connection and caring for patients holistically, nursing needs to expand its holistic model of care and consider the mind-body-nature connection. Frumkin (2003, p. 1451) explained that ‘there is every reason for those who care about public health to care about place’ and the impact such an approach could have was illustrated by one of the participants, Keith:

> *And then they shifted me down to another room of which we could look out and you looked down across the seam of the trees and everything else and I found it just felt totally different. You could see out, you could see something that was in touch with you.*

According to Grinde and Patil (2009), unlike the first European hospitals in monastic communities where gardens were seen as an essential part of the healing process, much of this connection has been lost as these methods have become outmoded with advances in medical technology and science. Without realising it, our modern approach to in-hospital care expects that people can recuperate and heal in an environment that is existentially foreign and deprives people of their most basic need of connecting with nature.

Modern hospital planning, especially in large metropolitan areas, is very much about creating space for treatment and more environmentally linked approaches may not be a priority when space is at a premium. But in light of the information presented by the participants in this study, even in today’s fast paced health care environment, it may be worthwhile to re-consider the old fashioned practice of taking patients outdoors to experience some fresh air and sunlight. Considering Walch et al. (2005) findings, that exposure to sunlight decreased the levels of stress and pain reported by postoperative spinal surgery patients, the evidence of the effectiveness of some of the ‘old fashioned’ practices are starting to emerge. Even though this would appear to be an impractical suggestion in a health care environment where time has become a very precious commodity for nurses, it may well be a good investment if access to outdoor areas enhances patients' recovery resulting in reduced lengths of stay in the hospital. Hospital planning could perhaps include in the overall design the incorporation of gardens or courtyards to create outdoor areas patients can visit. It would provide patients who are strongly connected to the land with the opportunity to enhance their recovery by reconnecting with the natural world. Perhaps there is opportunity for nurses to revisit some of the ancient wisdom and test it against modern trends to assess its possible value.

Based on the findings of this study, I would suggest that the human-centric approach of health care largely ignores a substantial part of our psyche. As humans we share this world with countless other living organisms. As suggested by Berman (1981), there is an increasing need to consider the roots of humanity and return to our place in the world. Much of human knowledge was once generated by observing and learning from nature but there has been a shift for individuals who have lost their 'intunement' to the land and instead believe in the power of technology and hard science to make sense of their world. Not taking into account the human - nature connection in relation to health care could have the potential to not fully meet the needs of some patient's health and well-being. Mehl-Madrona (2005) postulated that not feeling a connection to the whole system, and detachment due to the scientific approach to knowledge, has had dire consequences to human well-being. He said (2005, p. 26):

> Since people are connected, embedded, and entangled, their physiological processes are influenced by systems outside their conventional limits posed by modern biology. Healing is actually internal-systems reorganisation occurring at far-from-equilibrium conditions, and is dependent upon historical, socio-cultural, and geological matrix into which the person is embedded'.

6.6 Conclusion

Upon reflection, a sense of connection to the land has been an integral part of the life for the 17 rural men and women who took part in this study. Their connection is embedded in a deep physical, emotional and spiritual bond with the land, which served as a source of strength during times of adversity. All participants saw a large part of their connection to the land linked to their caretaker role, thus ensuring the health of the land was restored or maintained in order to assist their own and future generations' health and well-being. For all the participants, the land had explicit healing properties and they presented in a variety of ways, such as growing gardens, being in the company of animals or enhancing one's healing with bush medicine. Despite the level of challenge and hardship all of the participants had endured throughout their cancer survivorship journey, their connection to the land remained an enduring friendship.

CHAPTER 7: INSIGHTS AND IMPLICATIONS

This dissertation provides an original and as yet largely unexplored insight into how rural people deal with health adversity particularly in view of their sense of connection to the land. The aim of this dissertation was twofold. Firstly it aimed to answer the two research questions posed for this study; that is, how rural men and women with cancer describe their sense of connection to the land and how they report their survivorship journey in the context of this connection. Secondly, this study aimed to honour the participants' wishes to share their experiences with others, including health professionals and people diagnosed with cancer, for the purpose of education and support.

Dealing with a diagnosis of cancer as a rural resident is challenging on many levels, however the primary focus of this dissertation is based within a strength rather than a deficit perspective on cancer survivorship. While there is substantial evidence indicating poorer health outcomes for rural dwellers, there is also a significant amount of research and anecdotal data recording the 'lure' of rural life. It was this body of literature, as well as my own experiences as a semi-rural dweller, which led me to pose this project which explores the potential benefits of the rural environment at a time of health-related adversity. Despite the challenges implicit within a rural environment, including economic and personal difficulties, the participants in this study clearly demonstrated their natural affinity with the land which provided physical, emotional and spiritual benefits in the face of isolation and adversity.

In a strongly scientifically and medically orientated health care system, factors influencing health outside these paradigms are often ignored, or seen as within the realm of the 'alternative health' paradigm. However, as shown by the study participants, healing does not only occur through medical intervention, but also in an environment where people feel a sense of strength and solace. According to Jenkins (2006), nurses can play an important part in supporting people with cancer on their journey beyond cancer treatment and it is envisaged that the findings from this study will greatly assist any health professionals interested in expanding their ability to better assist and support their rural patients via the adoption of a holistic patient-centred perspective.

This qualitative study, which is methodologically situated within a constructivist framework, was not a straightforward journey. It has involved extensive consideration of how to proceed, and a number of different methodological approaches were considered. An initial review of the literature relating to the topic of interest showed a paucity of evidence relevant to the research question. This process was beneficial in identifying potential knowledge gaps and assisted in the planning of the research questions. The planning of the research methods and methodology required in-depth exploration of the literature, and much self-reflection, in an attempt to ensure that the chosen methods and methodologies were congruent with the aims of the study, and provided the best framework to undertake this research. Following a publicised call for participants, the interview process began by meeting with the participants face-to-face. The interview data were transcribed, member checked, and then analysed thematically. This process led to the development of the seven themes, which are reflective of the words of the participants. Given the constructivist underpinning of this study, it was also important to disclose my personal stance on the topic, however the voices of the participants remained at the forefront at all times. The findings from the thematic analysis were interpreted and discussed in the context of existing evidence in the literature and new and significant findings identified. Lastly, the strengths and limitations of this study were considered and are outlined in the next section.

7.1 Strengths and Limitations

At the completion of the study, it is appropriate to reflect on the various stages of this work, commencing with the inception of the topic, through the development of the research framework and then the actual implementation of the research, in relation to the ensuing strengths and limitations of the work as a whole. As outlined in Chapter 4, great attention was paid to designing a research study which was ethically proper, feasible for a doctoral level project, methodologically sound, and transparent at all levels. This section will outline my conclusions about the strengths and weaknesses of the research.

This study has a number of identifiable strengths relating to the broad range of participants with regard to sex, age and diagnosis. While having a homogenous group of participants can be desirable in studies which seek to compare and contrast findings, for this study, having a large cross section of participants added to the quality of the findings, especially because these findings demonstrated that despite the differences within the study group, there were many similarities in the experiences of the participants. Additionally, the diversity within the study group allowed for a greater breadth of experiences to be presented which I feel has added to the quality of this dissertation. Although I acknowledge that findings from qualitative research are not generalisable, the heterogeneity of the group suggests that the results of this study are likely to have transferability; that is, the findings are likely to be applicable to other people, other times and different settings (Taylor, Gibbs & Lewins 2005).

The primary sources of information for this study were 17 men and women, who were all cancer survivors, rural residents and reported a strong sense of connection to the land. One major strength of this study is that men and women are almost equally represented (nine men and eight women) and I consider this a very positive outcome. Typically from my own experiences in past research, it is often difficult to recruit men to participate in qualitative health-related research; however this was not an issue here. The opportunity for equal input provides a more balanced view into the issues from a male and female perspective.

Bearing in mind this participant group and their cancer diagnosis, only a few participants had similar cancer types. Even though I considered this issue at length in the initial study design (that is, I wondered whether I ought to restrict the study to participants with a particular form of cancer to limit its focus, or take a broader approach), I decided in the end that it was not my aim to explore the experiences for people with a particular type of cancer, for instance women with breast cancer, but to focus on their journey of recovery. Although recognising that people are affected differently in the long term depending on the type and severity of their cancer, I believe that exploring the topic across a range of cancer sufferers instead of a specific type, has added strength to this study. Generally speaking, despite the different cancers, the participants reported similar experiences regarding their sense of connection to the land and the only identifiable differences were if their type of cancer impacted on their ability to interact with the land.

The study participants also represented a large age range (24-80), with most participants being in the 61-80 year age group. Perhaps it could be argued that the experiences of life change as the person ages, but it seemed that the sense of connection to the land was distinctly present across all ages. Even though some of the older participants may not have been working on the land any longer, their love for the natural world continued and transferred into their home gardens, their pets, their daily observation of wildlife and the weather. In essence, age did not matter and at any stage in their lives participants found ways to interact with nature. Hence, demonstrating the congruence with which participants described their sense of connection to the land across the ages has added further strength to the findings of this study.

Finally, in my view, one of the most important strength of this study is that the participants' voices were strongly represented. This is consistent with Gilgun (2005) who emphasised that in the spirit of constructivism it is important that the voices of the participants and the researcher are not 'swirling below the surface' but their voices are clearly heard and 'grab' the reader's attention (p. 261). Although acknowledging my own perspective and presenting it openly, it was important that the participants’ voices were represented extensively throughout my work, in the presentation of the findings, the development of the themes and the interpretation of the findings. As mentioned previously, it was imperative to me to honour the wishes of the participants and to share their stories, which participants wanted to be of assistance to others. To achieve this, I have purposely aimed to write this dissertation in a way that is understandable and appealing not only to the academic reader, but to anyone who has an interest in gaining a deeper understanding on the subject matter. I feel I have done this and can only hope that this dissertation, and ensuing publications and presentations, will be a catalyst for discussion.

Clearly there are also limitations of this study which need to be documented and considered. Firstly although 17 participants is a relatively good number for a qualitative study, the findings are representative only of this group and as mentioned previously cannot be generalised to larger populations. A more sizeable participant pool would have been desirable, but given the constraints, such as time, travel distances, costs and resources, a larger study would have jeopardised my ability to complete this dissertation within the designated time frame.

Self-selection of the participants also meant that only people who are prepared to come forward and share their experiences are represented here. Undoubtedly the experience of being connected to the land, particularly in the face of health adversity, is different and unique to most individuals, but as for any research, the study findings are only representative of the people who consent to take part. It is clear that all the participants in this study felt a strong connection to the land and that this had an impact on their survivorship journey, however this may not be true for other rural cancer survivors.

Another limiting factor was that this study was conducted within a restricted geographical area. Rural Queensland was chosen as the study setting due to practicality and limited resources as outlined above, however a relatively large area of Queensland was not represented in this study because of the extreme distances involved in such a large state. On a broader level, much of the focus and information presented in this dissertation is within the Australian context, thus limiting its transferability to other countries.

As well, while this study has focused on connection to the land amongst rural and remote area dwellers, it would also have been useful to consider whether there are urban dwellers who also report a similar sense of connection to land, especially in the context of a health-related adversity such as cancer. This is an exercise well worth considering in the future.

For some readers, the whole-hearted, positive approach of this study may be considered a limiting factor, with a perception that this has perhaps omitted to capture the full picture of the 'realities' of rural living. As argued previously, our understanding of the challenges rural people face is well documented and known to many health professionals. Contrast that to the evidence on the strengths and positive influences of rural living, and a real gap is apparent. This gap may not exist because there is no 'up side' to rural living, but because health professionals continue to work from a deficit model. In some way I hope that this work will add another weight to the discussion of health and illness in rural communities to balance out the uneven scales.

7.2 Implications for Practice

In the spirit of Frumkin (2001, p. 239) who suggested that perhaps health professionals should 'advise patients to take a few days in the country, to spend time gardening, or to adopt a pet', this doctoral dissertation ends with some recommendations that expand the focus of our current health practices by considering the potential healing properties of nature. Nurses and other health professionals working in any location in an Australian health facility will inevitably have contact with clients from rural or remote backgrounds. Especially in the area of cancer care, where the centralisation of treatment facilities in major cities necessitates rural cancer patients to relocate for varying length of time, having an understanding of their ‘world’ and the context in which they live, is important as part of compassionate and considerate care. Long-term rural survivors have only limited access to continuing support, and assisting them to draw upon an existing strength, their connection to the land, can be helpful when health professionals are unable to provide ongoing, face to face support.

Traditionally, recommendations for people’s post-cancer treatment include suggestions for ongoing support for the patient and family, counselling, management of disease and treatment of side-effects, as well as regular medical follow up. In my experience, there are no suggestions, at least within mainstream health care, that engaging with nature could be a potential source for healing and strength. As presented in the literature review, there is ample evidence to suggest that contact with nature has health benefits (Frumkin 2001; Maller et al. 2002 ; Maller 2008; Moore, Townsend & Oldroyd 2007), and gaining a greater understanding in this area has the potential to enhance the practice of nurse and other health professionals working with patients who have, or could develop, a strong connection to the land. It is my recommendation that **nurses and other health professionals who aim to deliver holistic care to their patients, need to consider the individual’s connection to the land and include strategies to reduce the feeling of environmental isolation during their stay in hospital.** This is particulary pertinent for health professionals practising in major cities who come in contact with rural clients on a regular basis and may not fully identify with the importance of being connected to the land.

The benefits of the natural world are discussed in the literature and this has been verified by the participants in this study. However, including environmental issues in the health and illness discussion within the health industry is limited and, despite some of the evidence (Day 2007; Frumkin 2003), often ignored. Important areas for consideration include the physical design of health facilities, such as cancer treatment centres and accommodation centres for rural cancer patients, and the inclusion of green spaces within and outside such facilities. Treatment does not only occur during actual administration of a drug, therapy or intervention. The aesthetics of the physical environment in which the treatment occurs is important, and should not be an optional extra. Given the evidence on the link of psychological well-being and the physical environment and the findings from this study, **I recommend that the design of health facilities incorporates readily accessible green space to create physical health care environments that are conducive to healing and supportive of emotional and psychological well-being. This is particularly important for facilities that care for a large number of rural patients.**

Rural health cannot be viewed in isolation and it appears that there are many views and opinions on what is the best way to deliver health care to rural communities. I would suggest that this conflict stems from the temptation to see all rural people as a whole, rather than a number of distinct groups with unique needs and issues. As stressed by Humphreys (1998b), there is no single rural Australia, and it appears there is also no single model of rural health. Planning health care in rural and remote settings must be considerate of the location, the particular characteristics of the community, including its level of social cohesion, and the environmental context. This study has shown that a connection to the land significantly adds to how well people feel in relation to their location and overall satisfaction with their lifestyle. The rural environment cannot be separated from the individual and the community, particularly farming communities. **Therefore, I recommend that the comparison of rural and urban health should be limited and greater emphasis placed onto understanding the physical and social contexts (environments) in which rural health and illness occur. This should not only include the ill effects of environmental influences on health (such as drought and bushfire) but also the benefits of living in a more natural environment than city dwellers are able to experience.**

Generally speaking, most of the participants did not talk about their cancer in great detail and were more interested in sharing their experiences of being connected to the land. Their connection to the land had been a valued companion for most of their lives and a source of strength during times of adversity. The participants felt passionate about their life on the land; however they did not feel passionate about their cancer. In a way, this may be counterproductive. The silence and stoicism of rural survivors may prevent their voices being heard and may convey the message that long term support is not needed. As outlined in the literature, exploration of the needs of long term survivors compared to newly diagnosed patients is still relatively sparse and even more apparent for rural cancer survivors (Jacobson & Greenly 2001). It is important to hear the voices of rural survivors for the future planning of service delivery to areas outside the metropolitan areas and, considering the increasing rates of cancer survivors, their voices have to become louder. But more importantly, services need to be tailored to meet the specific needs of this population, as a generic, ‘one fits all’ models may not be appropriate. This means considering all aspects that influence the lives of rural people, including their connection to land. **Therefore I recommend that the planning for future support for long term cancer survivors is founded in the unique needs and requirement of rural cancer survivors. This would require close collaboration and consideration of all aspects influencing the lives of rural people**.

When considering models of care for rural communities, one issue that is unlikely to change is that rural people will have to travel to specialist health services. As demonstrated in this study, rural people prefer to stay in their home, not only to be close to their family, friends and familiar surrounds, but also to stay in touch with their natural environment. New and emerging technologies would greatly assist this to occur. Use of such technologies is not only a cost-effective and demonstrably useful way to deliver care to rural and remote communities, but also allows people to stay in their preferred environment. This would assist in their recovery and reduce stress experienced from relocation. **Hence I recommend that telemedicine should**

be considered as a method of delivering specialist care to rural areas and reduce the burden of travel and relocation for rural cancer sufferers.

Participants in this study also spoke about their dialogue with their health professionals about the possible links of their cancer diagnosis and the use of agricultural chemicals. Most participants were not satisfied with the information they received and continued to feel that in some way their work on the land had contributed to their cancer. Health professionals working in rural and remote communities, as well as specialists in urban areas, need to be in touch with current evidence on this matter, as it has a significant role in the work of their rural patients. Not being informed means potentially missing possible health problems or being unable to provide information to patients that helps them deal with their diagnosis. **Therefore I would recommend that nurses and health professionals respect their patients' views about the causes of their disease and provide them with information that is based on current evidence.**

Given that a general literature search in the area of occupational exposure to farming chemicals and cancer yielded substantial evidence, it is surprising that little use is made of it. Much of the evidence is produced in the United States and evidence generated in Australia is still relatively sparse. Undoubtedly, considering the substantial agricultural base in Australia, concerns regarding agricultural chemicals and cancer are very relevant to Australia. **Hence I recommend a comprehensive systematic review of the evidence in relation to a possible connection between cancer and the use of agricultural chemicals and secondly I recommend that more research in this area is conducted in Australia.**

As alluded to in the discussion of the strengths and limitations of this study, the focus has been on people living in a rural environment, however it would be interesting to further explore the sense of connection to the land for people living in urban areas. **Thus I recommend that the concept of feeling a sense of connection to the land be further investigated for cancer survivors living in urban areas.** This would provide opportunities to identify if people in urban areas may or may not have similar needs with regard to access to the natural environment.

Finally, cancer survivorship for people living in rural and remote parts of Australia is currently poorly researched and their needs have not been fully identified. **Hence, I recommend greater focus on research that explores the needs and issues surrounding cancer survivorship for rural and remote cancer survivors.**

7.3 Conclusion

My journey of exploring how rural men and women with cancer described their sense of connection to the land, particularly in view of their survivorship journey, has reached its final destination. This study provides a unique and novel insight into the importance of being connected to the land for the rural men and women who took part in this study. The findings will assist nurses and other health professionals in supporting their patient in a way that enhances healing and recovery.

In this last chapter, the strengths and limitations of this study were identified and a number of recommendations to improve the health care delivery for rural cancer sufferers were presented.

In closing, I would like to take the opportunity to share this poem as it poignantly captures the spirit of this study. It was written by the mother of one of the participants, who described her as a woman who had ‘a deep love and appreciation of the natural world’. The poem was given to me to as token of mutual sharing in the joy of being one with nature. The participant has given me the permission to publish this poem, but in order to maintain confidentiality; I have chosen not to reveal the name of the author.

In Praise of Beauty

Birds sing not with such gladness as I feel
When beauteous sights and sounds to me relate;
All sorrows and depressions dissipate,

And all these tiny miracles appeal;
The song of water tripping on a wheel,
Or thund’ring wetly onto iron or slate;
Emotive in its power to levitate.

The silken symphony that seems unreal;
The tiny wild flower is a precious life-
A hidden gem- a minute work of art,
Unseen by all the bustling world apart-

The passers-by upon the road of strife;
To those whose mind is tune to Nature’s heart
All forms of beauty joy thus impart.

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APPENDIX A

Media Release

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USQ Home > News and Events > Media Releases > New study into rural cancer survivors

Search USQ

New study into rural cancer survivors

People with a strong connection to the land who have been diagnosed with cancer are sought for a new study by University of Southern Queensland (USQ) PhD student Susanne Pearce.

The study will explore how connection to land may affect a person’s capacity to deal with a cancer experience.

Ms Pearce is particularly interested in talking to rural men and women who feel a very strong sense of connection to the land and have been diagnosed with cancer at least 12 months ago.

'For many years, I have had a particular interest in the health of rural people and I have had many opportunities to listen to their stories,' Ms Pearce said.

'Living in a rural environment can mean quite different experiences in relation to health and illness compared to urban counterparts.

'Listening to the experiences of connections to the land can give important insights into how rural living can influence a person’s experience with cancer.'

The study follows a body of research Ms Pearce conducted with Associate Professor Cath Rogers-Clark including the publication of the popular Tough Times book about how rural men have confronted adversity.

Ms Pearce will embark on this project with supervision from Associate Professor Rogers Clark and use face-to-face interviews to explore the factors that were important in each person’s journey through cancer.

Ms Pearce said she hopes the research will be used to help people with cancer in rural areas.

'This knowledge could help health professionals to provide care that is more supportive to rural people’s needs,' she said.

Participants who are interested in taking part in this research should contact Ms Pearce. She would like to interview rural people who are over 18 years of age and have been diagnosed with cancer over l2 months ago. Confidentiality is assured. Susanne Pearce can be contacted on mobile phone number XXXX.

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Updated 4 Sep 2007 | Webmaster Webmaster

APPENDIX B

Information Sheet/Consent Form

Thank you for your consideration in taking part in this study.

My name is Susanne Pearce and I am a Registered Nurse. I am currently undertaking studies in the Doctor of Philosophy (PhD) programme at the University of Southern Queensland and have chosen to focus my studies on how connection to land may affect a person's experience with illness. I am particularly interested in rural men and women who feel a very strong sense of connection to the land and have been diagnosed with cancer at least 12 months ago. I wish to explore factors that were important in rural people's journey through cancer.

For many years, I have had a particular interest in the health of rural people and I have had many opportunities to listen to their stories. Living in a rural environment can mean quite different experiences in relation to health and illness compared to urban counterparts. For this study I am interested to hear your story in relation to connection to land and cancer survivorship. Your experience will help to gain a better understanding how people in rural communities connect with the land and how this may influence their health and illness experience. This knowledge could help health professionals to provide care that is more supportive to rural people's needs.

If you are over 18 years of age and have been diagnosed with cancer over l2 months ago, I would like to invite you to take part in this study and share your experience. Some people report that sharing their stories with someone, has been a positive experience.

To take part in this study I would like to talk to you face to face at a time and location that suits you. The meetings should not take longer than one to two hours, but can also be scheduled over several sessions. I would like to take notes, as well as audio taping the interview for later transcription. Once transcribed, I will ask you to read the transcript to ensure that it is an accurate account of your experience and provide opportunity to delete or add any other information if you wish.

If you agree to take part in the study, I can assure you that confidentiality and privacy will be maintained. I am bound by strict ethical rules of the University to ensure that all processes are done to the highest professional standard. These rules include that anything you tell me will be kept strictly confidential and I will ask you to choose a fictitious name so you cannot be identified by anyone reading the PhD thesis or any other resulting publication. Any other details such as locations or anything else that could identify you will also be changed. All your information will be kept either in the computer, and this can only be accessed with a password, or in a locked filing cabinet in my home. Should you change your mind at any stage of the study, you can withdraw at any time without any problems.

If you want further information about this study, please feel free to contact me. I welcome your questions and comments. My home phone number is XXXX

Thank you for taking the time to read this sheet and consider my request.

CONSENT

I, ____ agree to participate in this research project being conducted by Susanne Pearce from the University of Southern Queensland.

I am aware of the aim of the study, and agree to be interviewed by Susanne one or more times (at my convenience) to explore my experiences with connection to the land and cancer survivorship. I have read the information above, and have asked Susanne to explain any details of the study and my participation that I was unsure about.

I agree to participate on the basis that strict confidentiality is maintained in respect to the information that I give Susanne. I am aware that all or parts of my story may be published in a research thesis, but that my name and any other identifying characteristics will be changed to protect my privacy.

By signing this consent form, I indicate my willingness to participate in this study, but reserve the right to withdraw from the study at any stage, without any adverse consequences.

Signed ____ Date ._____

Researcher ____ Date ______

APPENDIX C

Letter to Participants with Transcript

Dear …….

Please see enclosed the transcription of the conversation we had talking about your journey with cancer particularly in relation to your connection to the land. As mentioned in the information/consent sheet, I would like you to read the transcript to ensure that it is an accurate account of your experience and also give you the opportunity to add or delete any information if you wish. I will give you a call in a few weeks time to catch up with you and discuss the transcript. Alternatively if you need to discuss matters with me earlier please feel free to call me on XXXXXX after 6pm.

I would like to take this opportunity to thank you again for your valuable time and the wonderful and rich information you have given me. I will now spend the next twelve months analysing all the information I have gathered so I can share it with health professionals and other interested parties.

All the best for 2008

Kind Regards

Susanne Pearce

APPENDIX D

Example Transcript Coding and Thematic Analysis

Initial Codes

Yellow	*Demographics*
Green	*Connection to land(CtL)*
Pink	*Cancer Survivorship& CtL*
Grey	*Pesticides*
Blue	*? Important but no category yet*

Examples of code allocation and theme development

Transcribed data	Initial Codes	**Final Theme**
Interviewee: Seventy-four. I will be 75 in May next year. Interviewer: Ok, so you're a May person, just like me [laugh]. Interviewee: Oh, yeah, a Taurus.	*Demographics*	Included in the demographic data
Interviewer: So you were talking about that spiritual connection. How – can you kind of explain that a bit more? I know it's a really hard concept. Interviewee: It's a very hard concept. Interviewer: Everyone says to me "What do you say, what do you mean by that?" And it's not what I mean it's what you see. Interviewee: Well, what I mean is that – well we sort of grew up with it as children and you get – well, you just get a feeling for the land. You – it's part of you, you're part of it, it's part of you, it's not something separate. Interviewer: Yes, ok. Interviewee: Like it's not just a bank balance. Interviewer: No, no. Interviewee: I mean the bank balance is important but you've got to look after it.	*Connection to the land* – difficult to define *Connection to the land* – childhood *Connection to the land* – caring for the land	**The Land Is Part Of Me, It Never Leaves You** **Take Care Of The Land And It Takes Care Of You**

Interviewee: Oh that was dreadful. Interviewer: Well tell me about your experience when you had the radium? How did that feel? Interviewee: Well it was just like being a prisoner of war, you get what I mean. Interviewer: Ok. Interviewee: It was not my fault. Interviewer: No. Interviewee: If you get what I mean? Interviewer: So when you came back from the POW camp, from Brisbane, you must have felt pretty elated when you finally got home? Interviewee: I did. I stumbled into my garden and crawled around on my hands and knees and grew vegetables. Interviewer: Did you? Yes. Interviewee: And I couldn't milk but everyone used to milk and I used to separate and I got back into Landcare and got into all sorts of things.	*Cancer Survivorship & CttL*- separation during treatment *Cancer Survivorship & CttL*- re-connecting with nature post treatment	**The Land Is Part Of Me, It Never Leaves You** **I Really Think It Has Got Healing Properties**
Interviewee: Well I definitely think because there was none sort of in our families before this was. Like it's – it turned up in this generation with sheep and, well I would be surprised if it wasn't chemicals. Interviewer: And they're tough, those chemicals. They were really – a lot of them have been taken off the market now. Interviewee: Yeah, well see they're all gone now but they were the best things since sliced bread and we used them and… Interviewer: And people said to me too they weren't always taking all the precautions. Interviewee: Oh, no we didn't know we were you know.	*Pesticides*- possible cause of cancer *Pesticides* –past use of pesticides *Pesticides* – handling practices	**I've Almost Got No Friends Left**

Interviewee:	Yeah I mean there's nothing – I mean one of the things that I have missed, the things that I have missed but I've closed my mind to it is that I was forbidden to ride a horse and not so much the fact of not being able to ride a horse is there's nothing more liberating than being in the bush on a horse. You see everything, you haven't got to guide the horse. My wife says I drive a car like…	? Important but no category yet	**You've Got To Live With Nature- She's A Pretty Hard Task Master**
Interviewer:	Yeah the horse knows where he's going.		
Interviewee:	Yes, he knows where he's going.		
Interviewer:	I'm a horse rider myself, so I can appreciate that.		