



2015

The Psychological Well-Being of Men Diagnosed with Prostate Cancer

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THE PSYCHOLOGICAL WELL-BEING OF MEN
DIAGNOSED WITH PROSTATE CANCER

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy
in the College of Nursing at the University of
Kentucky

By
Lee Anne Walmsley

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2015

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ABSTRACT OF DISSERTATION

THE PSYCHOLOGICAL WELL-BEING OF MEN DIAGNOSED WITH PROSTATE CANCER

Prostate cancer (PC) affects one in eight men in North America and continues to be the most common site of cancer in males, especially among older men in Europe and the United States, and the second most common cancer worldwide. Prostate cancer is, after lung cancer, the most common cause of cancer-related deaths among men with an estimated 27,540 deaths in 2015.

The well-being of patients diagnosed with PC is a largely unexplored research area. Numerous factors likely impact men's psychological well-being as they progress through the experience of managing PC. Among the various factors that may predict psychological well-being for these men, social support, marital adjustment, and emotional expressiveness seem to warrant investigation based on the research literature. "Psychological well-being" as described by Ryff offers a unique way of measuring psychological functioning of men diagnosed with PC and appears to be a multidimensional view of positive psychological functioning.

Little research has been conducted to examine how various factors influence psychological well-being in men with PC. The purpose of the study was to examine correlates and predictors of overall psychological well-being in a sample of men diagnosed with PC. Independent variables included three psychological factors-social support, marital adjustment, and emotional expressiveness. The design of the study was descriptive and cross-sectional. Measures used included: a demographic questionnaire, Scales of Psychological Well-Being, Dyadic Adjustment Scale, Expression of Emotion Scale, and a Visual Analog Scale of Social Support. Data analyses examined three predictors and the dependent variable—total psychological well-being. Findings show that marital adjustment significantly predicts total psychosocial well-being scores in men diagnosed with cancer in a positive direction. Implications for therapeutic practice and future research are discussed. Lack of support may place men diagnosed with prostate cancer at risk for poorer psychological well-being. Identification of at-risk men and referral to support services may improve overall psychological well-being.

KEYWORDS: Psychological well-being, prostate cancer,
dyadic adjustment, emotional expressiveness,
social support

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To My father, Charles "Charlie" Mohr

ACKNOWLEDGMENTS

I extend sincere gratitude to Dr. Dorothy Brockopp for her invaluable guidance throughout each step in the research process. Thanks also to Dr. Rebecca Dekker not only for dedicating timeless energy and effort in guiding and assisting me to complete this project, but also for her incisive comments, suggestions and infinite patience. I express gratitude to Dr. Fred Danner for supporting me from start to finish and helping me at every step of the way. Profound appreciation is extended to Dr. Patricia Howard who has served as my Chair and provided invaluable encouragement and guidance along the way. To my father, my family and special friends, I offer sincere appreciation for their love, faith and support during this experience. Finally, I am grateful to all the participants who took the time to contribute to the knowledge base of understanding the psychological well-being of men with prostate cancer.

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Chapter 1: Introduction

“Prostate cancer is a silent killer. In its curable state it has no symptoms.”
– Wally Seeley

The well-being of men diagnosed with prostate cancer (PC) is a largely unexplored research area. Numerous factors may impact men’s psychological well-being as they manage PC. Among various factors that may predict psychological well-being for these men, social support, marital adjustment and emotional expressiveness seem to warrant investigation based on research findings.

Coping with the diagnosis and treatment of PC is challenging as men confront a variety of concerns ranging from physical health issues to interpersonal issues to existential matters. While some seemingly adjust to the physical and psychosocial challenges successfully, others experience more difficulty.

Prostate cancer affects one in eight men in North America and continues to be the most common site of cancer in males, especially among older men in Europe and the United States, and is the second most common cancer worldwide. Prostate cancer is, after lung cancer, the most common cause of cancer-related deaths among men with an estimated 27,540 deaths in 2015 (ACS, 2015; Eton & Lepore, 2002; Hegarty, Wallace, & Comber, 2008; Helgeson & Lepore, 1997; Wootten et al., 2007).

Whereas a diagnosis of PC used to be quite grave, advances in medicine have resulted in concurrent improvements in overall prognosis and increased survival rates. More than 90% of all PCs are discovered in the local or regional stages, for which the 5-year relative survival rate approaches 100%. Over the past 25 years, the 5-year relative survival rate for all stages combined has increased from 69% to 99.6%. According to the

most recent data, the relative 5-year survival rate is almost 100%, relative 10-year survival is 99% and the 15-year relative survival rate is 94% (ACS, 2015). So while PC remains a significant health problem, advances in diagnosis and treatment have resulted in dramatic improvements in survival rates.

The recent increase in survival rates of men diagnosed with PC, however, presents new challenges. Palliative care issues, such as symptom management, have emerged as major concerns as men cope with various treatments (e.g., surgery, radiation, chemotherapy, and hormone therapy) and the subsequent side effects, both physiological (sexual dysfunction and incontinence) and psychological (depression and anxiety) (Burke, Lowrance, & Ruben, 2003). The adjustments that men have to make are challenging as they deal with emotional distress and manage changes in physical and social functioning while maintaining quality of life. Some men are cancer-free after treatment while others live with the disease for many years. The fact that men live with rather than die from PC does not alleviate the emotional, social, sexual and physical impairments associated with PC. Consequently, most men diagnosed with PC face the prospect of a life-long future trying to manage the challenging effects of the disease and its treatment, both of which impact their quality of life (Love et al., 2008).

Despite its significance for men's health, less is known about the psychosocial impact of PC and its treatment than that of other cancers (Ames et al., 2008; Balderson & Towell, 2003; Eton & Lepore, 2002; Hegarty et al., 2008; Love et al., 2008). Research related to quality of life, has focused primarily on the physical side effects of treatment, rather than the psychological effects and emotional distress (Penson, 2007). Very little is known regarding the psychosocial health and well-being of this large group of

chronically ill, oftentimes elderly, male patients. Researchers have suggested that factors such as cancer staging and treatment influence men's adjustment to PC (Ames et al., 2008; Eton & Lepore, 2002). Although these variables have been among the most common factors associated with quality of life or well-being, other psychosocial variables warrant attention. Given the disease's potential trajectory, from the immediate impact of diagnosis, to the phase of palliative and terminal care (with its attendant existential issues), along with the complexity of psychological adjustment, this is a fertile area for research (Ames et al., 2008; Balderson & Towell, 2003; Cella & Tulskey, 1993; Foster, Wright, Hill, Hopkinson, & Roffe, 2009; Kornblith, Herr, Ofman, Scher, & Holland, 1994).

In 2015, approximately 220,800 American men will be informed that they have PC (ACS, 2015). Each of these men has had to cope with the statement, "You have prostate cancer." Once the initial anger, denial, and remorse are dealt with, men generally seek support (Gray, 2003). Psychosocial factors, such as social support and interpersonal relations are widely recognized to affect adjustment to PC and to provide psychological benefits (Arrington, Grant, & Vanderford, 2005). Studies note a positive relationship between emotional support from family members and the degree of physical and psychological adjustment to PC (Baider, Ever-Hadani, Goldzweig, Wygoda, & Peretz, 2003; Balderson & Towell, 2003; Banthia et al., 2003; Taylor, Falke, Shoptaw, & Liehtman, 1986).

Prostate cancer researchers point to varying types of support (including partner, friends, family, and social groups) positively impacting the patient as he manages this complex life experience and have suggested that marriage is an important component of

support. (Banthia et al., 2003; Couper et al., 2006; Lintz et al., 2003; Taylor, et al., 1986). Researchers have typically examined marital status rather than marital adjustment. Few researchers have studied marital adjustment and social support and, therefore, have not clarified whether the benefits of social support may be the result of having a partner available to offer support and assistance, or whether other aspects of support are also important. Few studies have addressed the unique roles of social support and marital adjustment and their association; more information is needed to understand how social support and marital adjustment contribute to the psychological well-being of these men.

Quality of life has become an issue for many men with PC, particularly when making decisions regarding treatment options. Some studies have suggested that men with PC are willing to make treatment decisions that optimize well-being rather than maximize survival (Albertsen, Nease, & Potosky, 1998). Quality of life, more specifically, Health Related Quality of Life (HRQoL) has been commonly used over the past 30 years to measure psychological outcomes of negative health events. The term HRQoL covers the physical, psychological, and social domains of health, which are conceived as distinct areas influenced by one's experiences, beliefs, expectations and perceptions (Testa & Simonson, 1996).

Rather than investigating psychological well-being of patients with cancer, most researchers use HRQoL to measure psychological outcomes, conceptualized as the effect illness has on daily life regarding subjective well-being, satisfaction and self-esteem. (Scholz, Knoll, Roigas, & Gralla, 2008). Historically, clinicians have primarily focused attention on evaluation of cancer treatment outcomes (such as control of symptoms,

response to treatment, relapse, and survival), with less attention paid to how disease and its treatment affect quality of life (Visser et al., 2003).

Before HRQoL was used, the primary outcome measure in cancer studies was functional status or performance status, with little to no regard for psychological aspects of adjustment to the diagnosis of cancer (Batel-Copel, Kornblith, Batel, & Holland, 1997). The more traditional measures of HRQoL have been physical and occupational function, where questions related to activities of daily living and jobs were asked (Grady, 1993). Residual symptoms experienced by men with PC have been increasingly recognized to pose significant quality of life issues. Instead of assessing HRQoL to measure psychological outcomes, “Psychological Well-Being” as described and defined by Ryff (1989) offers a different way of measuring psychological functioning of men diagnosed with PC and appears to be a more comprehensive view of positive psychological functioning. According to Ryff (1989), psychological well-being is a multidimensional construct made up of six areas of positive functioning: Autonomy, Positive Relationships with Others, Purpose in Life, Personal Growth, Environmental Mastery, and Self-Acceptance. Thriving in life depends on the degree to which one sees oneself competently functioning in these areas.

Men with PC experience many significant obstacles to positive psychological functioning. They commonly report distress, anger, anxiety and depression as they cope with the disease and subsequent treatments; relatively little is known about factors that impede or promote men’s adjustment to these treatments (Eton & Lepore, 2002).

The painful physical changes caused by PC often pale in comparison to the emotional distress (psychological effect) inflicted by the disease. Korda (as cited in Arrington, 2003) spoke specifically about men's fear of PC:

Prostate cancer is the biggest fear of most men. It carries with it not only the fear of dying, like all cancer, but fears that go to the very core of masculinity – for the treatment of prostate cancer, whatever form it takes almost invariably carries with it the well-known risk of incontinence and impotence that strikes directly at any man's self-image, pride, and enjoyment of life, and which, by their very nature, tend to make men reticent on the subject (p. 32).

Prostate cancer can be thought of as an experience that threatens one's view of self.

One aspect of self that may be particularly threatened by a diagnosis of PC is the masculine self (the man's perception of his masculinity). The very act of becoming ill can threaten the traditional male role because illness implies weakness and a lack of control over one's body. Strength and control are central features of traditional masculinity. Adherence to the traditional male gender role may impede adjustment to an illness such as PC, because the treatments affect sexuality and control over bodily functions (Helgeson & Lepore, 1997).

Masculine gender scripts, (ways of thinking, feeling, and acting based on socially prescribed traditional norms of masculinity), may also affect men's adjustment to the diagnosis of PC. Gender scripts are acted out, resulting in men's restriction of emotional expressiveness. Specifically, men's adherence to traditional scripts of masculinity (e. g., being independent, being unemotional, and defining one's worth in terms of sexual potency) may hinder their adjustment to PC by depriving them of important sources of

social and emotional support and thus increasing the salience of losses in urinary and sexual functioning (Helgeson & Lepore, 2004).

Emotional control is a masculine script suggesting that “boys don’t cry,” and that men should not reveal vulnerable feelings. “As a result of this socialization, strong emotions for many men are a symptom of weakness, and therefore, should be avoided at all costs, which may stem from social expectations that men be fearless, tough and stoic” (Burns & Mahalik, 2007, p. 253). Recognition of these gender scripts may help professionals caring for men with PC appreciate how these scripts may affect men’s thoughts, feelings, and behaviors during their adjustment to PC, thus increasing their understanding of these men’s responses to changes in their health.

Psychosocial interventions and supportive care for men with PC are not routinely offered, possibly because these men’s needs are not fully understood. Researchers should investigate the variables and factors associated with the psychological well-being of men with this increasingly common health problem (Balderson & Towell, 2003; Kornblith et al., 1994). A pilot study to investigate the extent of anxiety and depression in patients with PC found the prevalence of increased symptoms of depression to be 53%, increased anxiety symptoms to be 42%, with 61% of patients having some increase in either depression or anxiety as defined as > 10 on the Beck Depression Inventory (BDI). Additionally, patients with more depression or anxiety rated themselves as having more physical limitations, poorer physical functioning, more pain, and a lower self-perception of general health (Burke, Lowrance, & Perczek, 2003). Men with PC seem to be at increased risk for suicide within the first six months of diagnosis, further reinforcing the importance of identifying the needs in this population of patients. Llorente et al. (2005)

reported the risk of suicide in men with PC as being 4.24 times that of an age-and-gender-specific cohort. In their study in men age 65 and older in Dade County Florida, the average annual incidence rate of suicide among those men diagnosed with PC was 274.60 per 100,000 persons. The average annual incidence rate of suicide in the age-and-gender-specific population during this period was 55.32 per 100,000 persons. The clinical correlates included depression, cancer diagnosis within six months of suicide, physician visit within one month of suicide and being foreign-born. This finding further stresses the importance of examining factors that contribute to the psychological well-being of men with PC in order to assess and identify men who may be at risk.

As new cases of PC grow in number, clinical investigators and health-care professionals should work collaboratively to educate men and their families about the effects of the disease and its treatment on psychological well-being. The impact of psychological well-being is particularly important given the different treatment options available since all treatments involve a risk/benefit tradeoff (Eton & Lepore, 2002). Ultimately, any course of therapy should meet both the physical and psychosocial needs of the individual and his family.

Investigation of the influence of social support, marital adjustment and emotional expressiveness on the psychological well-being of men diagnosed with PC would contribute to the current research on PC. Men diagnosed with PC may be at risk for diminished psychological well-being. To date, however, little is known about the factors that influence these men's psychological well-being. Thus, in this study, the relationship between social support, marital adjustment, emotional expressiveness and men's psychological well-being diagnosed with PC was investigated. This study addressed the

lack of attention given to men's emotional expressiveness upon receiving a diagnosis of PC along with adding to our understanding of how social support and marital adjustment influence these men's psychological well-being.

Chapter 2: Selective Literature Review

Prostate cancer (PC) is the most prevalent solid tumor malignancy and second-leading cause of death from cancer for American men (ACS, 2015). Although the mortality rate is coming down due primarily to early detection, the number of men being diagnosed with this disease continues to increase dramatically. The diagnosis of PC has risen in the last 15 years because of the routine use of a simple blood test, the Prostate Specific Antigen (PSA) Test (Gotay, Holup, & Muraoka, 2002). However, there has been much controversy over the use of the PSA test over the past few years, with some organizations, such as The U.S. Preventative Services Task Force (USPFTF), recommending that the PSA no longer be used routinely (based on health care dollars available pertaining to the Affordable Care Act), while others continue to recommend its routine use. The effect that this controversy and the new recommendations will have on cancer diagnosis rates and PC mortality rates is yet unknown.

Prognosis for patients with PC is relatively favorable, with only 5.8% of cancer deaths in men being attributed to PC. Many men will die of causes other than PC (Gotay et al., 2002; Huang, Sadetsky, & Penson, 2010). While PC can prove fatal, 99.6% of men diagnosed will survive for at least five years, and 95% will survive for at least ten, with a majority of men surviving for a decade or more following diagnosis (ACS, 2015). Thus, the psychological well-being of men diagnosed with PC is an important topic for research. Addressing several gaps in the literature about PC, this research study will contribute to our understanding of how social support, marital adjustment and emotional expressiveness impact the psychological well-being of men diagnosed with PC.

Diagnosis and Treatment of Prostate Cancer

Receiving a diagnosis of PC is reported to be a deeply disturbing experience for some men as they perceive the diagnosis as a threat to survival, while treatment often results in men suffering distressing physical complications (erectile dysfunction and urinary incontinence), which threaten their self-image and their masculinity (Boehmer & Clark, 2001). Controversies rage about the effectiveness of early detection strategies and about the relative merits of various treatments.

Unfortunately, not been much research investigating the psychosocial and quality of life issues for men diagnosed with PC has been conducted. Where quality of life has been assessed using global psychometric measures, patients with PC have usually been reported to do relatively well, although less so as the disease progresses. With the trend being to conduct more disease-specific assessment, more problems have been identified. Sexual dysfunction and urinary incontinence in patients with PC are now understood to be more frequent consequences than previously reported. Researchers have speculated that some men may develop a “grin-and-bear-it” response to their illness, an approach perhaps so ingrained by traditional gender differences in socialization that problems were minimized and their emotional effect consequently diminished (Gray, Fitch, Phillips, Labrecque, & Fergus, 2000). Consideration of problems with emotional expressiveness specific to men has largely been ignored; only recently has this topic begun to be seriously addressed, which may be especially relevant for PC research.

Concerns for the psychological well-being of patients with PC can occur at various points in the course of the disease, such as the time of assessment, diagnosis, treatment, follow-up or recurrence. In addition, anxiety about progression of the cancer,

becoming disabled and/or dependent, and dying can be manifested (Balderson & Towell, 2003). Even with the good news of early detection and cure, current recommended treatments for PC have a high likelihood of significant side effects for men, raising quality of life issues. This disease, more than most, attacks the very heart of a man's self-definition because the disease, along with its treatments, is often described as threatening to a man's masculinity.

Some of the significant and distressing side effects associated with the primary treatments for PC include sexual, urinary, and bowel dysfunction that can trigger major mood changes and increased irritability, anxiety and depression. Additionally, most men diagnosed with localized tumors are faced with a complex dilemma concerning treatment options, which may heighten their anxiety about making the right choice in what is an irreversible decision (Arrington et al., 2005). Also, older men sometimes evidence reluctance to admit and report distress, which may lead to an underestimation of their problems in relation to any psychological distress accompanying the decision surrounding choice of treatment options (Balderson & Towell, 2003).

Instead of aggressive treatments, active surveillance (also called "watchful waiting" or a "wait-and-see" policy with no treatment) may also be a reasonable strategy in selected patients with localized PC. Watchful waiting avoids medical damage to nerves that may result in incontinence and impotence. Hormone treatments cause men to lose sexual desire, develop secondary female characteristics and experience hot flashes (Couper et al., 2006; Love et al., 2008). Clearly, treatment side effects can dramatically affect a man's view of himself, and this dilemma may be further compounded by men's lack of emotional expressiveness.

To add to patients' predicament in choosing a treatment, physicians admit that no one correct treatment for PC is indicated, that side effects vary and that treatments often differ in effectiveness (Penson, 2007). When making decisions about treatment options, men must weigh the watchful waiting strategy with more aggressive treatments, and keep their quality of life in mind (Arrington et al., 2005; Couper et al., 2006; Eton & Lepore, 2002; Love et al., 2008; Penson, 2007).

In terms of the burden of psychological disturbance with PC, some researchers report a high (50-64%) prevalence of anxiety, whereas others report low levels that are no different from those of a matched normal population (Awsare et al., 2008). Older men's reluctance to admit and report distress may be a possible explanation of these findings of minimal psychological disturbances in psychological well-being in men with PC compared to a matched normal population. Therefore, considering the traditional masculine gender script of emotional expressiveness may be important when investigating well-being in this population.

When researchers have investigated the effects of different variables in patients with PC, they have generally examined the relationship between psychosocial variables such as quality of life or emotional functioning and non-psychosocial variables, such as length of survival, types of treatment, participation in informational interventions or existence of pain. Much of the work to date has focused on performance status and clinical symptoms without incorporating aspects that reflect the patient's own viewpoint of his condition or what has been found to be helpful (Bjorck, Hopp, & Jones, 1999).

This study will address gaps in knowledge by examining psychosocial variables and investigating relationships between various forms of support (e.g., social support and

marital adjustment), emotional expressiveness and psychological well-being in men with PC. Specifically, investigating men's emotional expressiveness and how it, along with social support and marital adjustment, influence these men's psychological well-being will be unique.

Theoretical Framework

Health researchers have moved away from looking at mortality as the primary health-related measure, and are now including outcomes such as quality of life and psychological well-being in their studies. In the past, researchers focused more on negative aspects of health rather than examining positive facets of health. Today, more researchers are examining positive aspects, and much of this research is drawn from psychological literature on well-being. Most investigators support the notion that psychological well-being is a multidimensional construct. Psychological well-being refers to a broad sense of subjective well-being describing one's state of mind rather than one's actions (feeling rather than function) (Clarke, Marshall, Ryff, & Rosenthal, 2000).

Psychological well-being. Psychological well-being has long been an area of interest for social researchers, but with focus given more to human unhappiness and suffering, rather than the causes and consequences of positive functioning and feeling well (Diener, 1984). Even the traditional meaning of basic terms such as "mental health" are negatively biased, equating health with the absence of illness rather than the presence of wellness; some contend that this view ignores human capacities to overcome difficult challenges and the need to flourish (Ryff & Singer, 1996).

Ryff (1989) argues that much of the historical view of well-being is founded on concepts that have little theoretical rationale, thus neglecting important aspects of

positive functioning. Previous literature has emphasized short-term affective well-being at the expense of more enduring life challenges, such as having a sense of purpose and direction, achieving satisfying relationships with others and having a sense of self-realization.

Overall, subjective well-being consists of two broad domains: emotional well-being and positive psychological functioning (Ryan & Deci, 2001). Emotional well-being has been measured as the balance between positive and negative affect, avowed life satisfaction, and affirmed happiness with life. Positive psychological functioning has been measured as psychological well-being and social well-being. Social integration, social coherence, social acceptance, social actualization and social contribution are the components of social well-being (Keyes & Magyar-Moe, 2003).

Ryff's (1989) concept of psychological well-being is drawn from life span developmental perspectives, concepts of personality and mental health and clinical psychology. Ryff considered various ideas of positive functioning such as: (a) Maslow's concept of self-actualization, (b) Roger's view of the fully functioning person, (c) Jung's formulation of individuation, (d) Allport's conception of maturity, (e) Erikson's psychosocial stage model, (f) Buhler's basic life tendencies that work toward the fulfillment of life, (g) Neugarten's description of personality change, and (h) Johoda's positive criteria of mental health that was generated to replace the definition of well-being as the absence of illness. Ryff synthesized these themes to form the basis for a new definition of psychological well-being.

Ryff (1989) was concerned about the absence of valid measures for this construct, pointing out that the criteria of well-being generated were diverse and extensive and

seemed value-laden in their pronouncements about how people should function. Based on these concerns, Ryff integrated all of these different perspectives in an alternative formulation of psychological well-being, and subsequently developed a multidimensional model of positive psychological functioning.

Definitions of components of psychological well-being. Definitions of the six constructs of Ryff's (1989) positive functioning are as follows:

- (a) *Autonomy* is the degree to which someone is self-determining and independent; able to resist social pressures to think and act in certain ways; regulate behavior from within; and evaluate self by personal standards.
- (b) *Purpose in Life* is the degree to which someone has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; and has aims and objectives for living.
- (c) *Positive Relationships with Others* is the degree to which someone has warm, satisfying, trusting relationships with others; is concerned about the welfare of others; is capable of strong empathy, affection, and intimacy; and understands the give and take of human relationships.
- (d) *Personal Growth* is the degree to which someone has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; and is changing in ways that reflect more self-knowledge and effectiveness.
- (e) *Environmental Mastery* is the degree to which someone has a sense of mastery and competence in managing the environment; controls a complex array of

external activities; makes effective use of surrounding opportunities; and is able to choose or create contexts suitable to personal needs and values.

(f) *Self-Acceptance* is the degree to which someone possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self, including good and bad qualities; and feels positive about past life (Ryff, 1989, p. 1072).

Ryff's integration of multiple theories offers an expanded notion of well-being.

Ryff subsequently designed an instrument to measure these six components of well-being and named it Ryff's Scale of Psychological Well-Being (SPWB) (Ryff & Singer, 2006).

Ryff's expanded multifaceted concept of well-being is ideal for investigating how complex psychosocial variables such as support, marital adjustment, and emotional expressiveness influence the psychological well-being of men diagnosed with PC.

Review of the Selected Literature

The following section contains a critical review of selected literature focused on the variables in the study. The literature reviewed includes social support, marital adjustment and emotional expressiveness in order to better understand how such factors influence the psychological well-being of men diagnosed with PC. After reviewing more than 98 research articles on Ryff's notion of psychological well-being, social support, marital satisfaction/adjustment, and emotional expressiveness, 36 were selected based on relevance to the study. Search criteria of inclusion were based on studies where investigators: (a) focused on men with cancer, particularly PC; (b) reported on the potential influence of psychosocial variables; and/or (c) reported on the potential influence of psychological factors such as social support, marital satisfaction/adjustment, and emotional expressiveness on quality of life of men diagnosed with PC.

Social support. In recurrent psychological, sociological, and medical literature, social relationships have been shown to influence not only morbidity, but even human mortality. The concept of social support grew out of early epidemiological studies suggesting that the presence of others was positively related to health and well-being. The literature provides varying definitions of social support, many of which are vague. Therefore, the term is used broadly, often referring to mechanisms by which interpersonal relationships protect people from negative stress effects (Ell, Nishimoto, Mediansky, Mantell, & Hamovitch, 1992).

Researchers have concluded that primary social relationships, and the coping resources they provide, are essential in managing stress and, therefore, in influencing both psychological and physical health. The psychological influence of social support and interpersonal relations impact the patient's adjustment to cancer and are widely recognized as an advantage; studies indicate a positive association between support from friends and family, and the degree of physical and psychological adjustment to cancer (Taylor et al., 1986).

Other studies indicate that social support at the time of diagnosis is associated with less emotional distress and higher longevity (Krishnasamy, 1996; Manne et al., 2004). Collectively, the consensus of research to date indicates that social support aids with coping and is critical to cancer patients' psychosocial well-being (Carlsson & Hamrin, 1994; Cobb, 1976; Ell et al., 1992; Parker, Baile, de Moor, & Cohen, 2003; Taylor et al., 1986).

Social environment is an important domain in the study of cancer since aspects of the social environment have been shown to promote well-being and to protect persons

from the deleterious effects of stressful life events, such as cancer. Both the structural aspects of social networks (e.g., size) and the functional aspects of social support (e.g., emotional support) have been related to cancer morbidity and mortality.

Cancer is a stressful event that influences interpersonal relationships; receiving a diagnosis of cancer may even challenge basic assumptions about self and the world, leading to a sense of personal inadequacy, diminished feelings of control, increased feelings of vulnerability, and a sense of confusion (Janoff-Bulman, 2004). People in one's social support system can behave in ways that influence these reactions to illness. Patients with cancer are often unable to maintain their social activities, which in turn affects their access to interpersonal resources. Thus, cancer patients may have difficulty obtaining social resources just when they need them the most (Helgeson & Cohen, 1996).

In spite of the acceptance that social support is generally beneficial, detailed evidence for the role is equivocal. Some confusion results from inconsistency in the quality of published studies and from differences in conceptualization of social network variables, and failure to consider whether relationships within the social network may differ across patient gender, stage of disease, and cancer site.

Social support has been studied extensively by a variety of disciplines, and, although definitions of social support vary to some degree, researchers and clinicians agree that the construct is complex and difficult to operationalize. Many definitions of social support exist, with most conceptualizations emphasizing support as either expressive aid or instrumental aid (Bertero, 2000).

Some authors emphasized expressive emotional components, defining social support as information that leads one to believe that he is (a) cared for and loved, (b) esteemed and valued, and (c) has a sense of belonging (Cobb, 1976). Other authors emphasize instrumental aid, defining social support as (a) emotional aid and advice about family problems, (b) small services including lending and giving of household items, (c) large services including household repairs, assistance with housework, and long term health care, (d) financial aid, and (e) companionship (Wellman & Wortley, 1990).

Still others balanced their definition of support and included: (a) emotional aid involving caring, love and empathy, (b) instrumental aid, information that may assist in problem solving, (c) appraisal support providing information pertinent to self-evaluation, and (d) companionship (Sherbourne & Stewart, 1991).

While a clear, balanced definition of social support is important to investigation, these functions of social support are highly interactive and functionally cannot be isolated from each other. For instance, emotional aid may allow an individual to continue working, or instrumental aid may be perceived as demonstration of a caring relationship (Lackner, Goldenberg, Arrizza, & Tjosvold, 1994).

Helgeson and Cohen (1996) conceptualized social support with different language, but described similar concepts, summarizing three primary types of supportive social interactions: emotional, informational, and instrumental. Theoretically, each type of support can influence patients' reactions to the experience of having cancer.

Emotional support, according to these authors, involves verbal and nonverbal communication of care and concern (including listening, being there, empathizing, reassuring, and comforting). Emotional support can aid in restoring self-esteem,

increasing feelings of personal adequacy by reassuring the patient that he or she is valued and loved, and permit the expression of feelings that may reduce distress. Emotional support can lead to increased attention to relationships; improvement in interpersonal relationships often follows, which may provide some purpose or meaning for the disease experience (Helgeson & Cohen, 1996).

Informational support involves providing information that is used to guide or advise the patient. Information can enhance perceptions of control by providing patients strategies for managing illness and coping with symptoms. Learning how to manage the illness may also enhance patients' optimism about the future, thereby reducing feelings of vulnerability. This type of support can help to ameliorate the sense of confusion that arises from being diagnosed with cancer by helping patients understand the cause, course, and treatment of the illness (Helgeson & Cohen, 1996).

Instrumental support involves the provision of material goods such as transportation, finances, or help with household responsibilities. This type of support may offset the loss of control that patients experience during cancer treatment by providing tangible resources that they can use to exert control over their experiences (Helgeson & Cohen, 1996).

Bertero (2000) defined support as encompassing components, including affect, affirmation, and aid. This definition is widely used by researchers because it provides an operational definition of social support that allows the dynamics of support to be studied using a structural model (describing a person's network of relationships) and a functional model (featuring an individual's perception of the types and qualities of relationships).

After reviewing the literature, social support remains a deceptively complex construct. Regardless of one's number of social contacts or the manner in which the support is provided, the patients' perception of how social support affects their well-being is subjectively determined. Another view of social support distinguishes perceived social support from received social support. Perceived social support refers to a subjective opinion of how much support is available when needed (perceived quality of support), and received support refers to the number of individuals (quantity) in one's social network (Scholz et al., 2008; Wills & Shiner, 2000). Evidence suggests that perception of social support is more predictive of positive health than received or available social support (Hutchinson et al., 2004).

Studies have been conducted assessing men's perception of social support and how the perception of social support influences psychological well-being following a diagnosis of PC. Surveys were used to collect data including demographics, disease and treatment information, experiences during diagnosis and treatment, perceptions regarding access to information, satisfaction with communication with healthcare professionals, problems experienced and assistance received for the problems, availability of emotional support, impact of illness and treatment on lifestyles, use of alternative therapies, knowledge about cancer causation, and suggestions for public strategies to promote funding for PC research and care. Social support was purported to be among relevant factors influencing how patients and their spouses deal with the illness, with both patients and spouses citing social support in some studies as the primary factor facilitating adjustment (Fitch, Gray, Franssen, & Johnson, 2000; Keitel, Zevon, Rounds, Petrelli, & Karakousis, 1990).

Further, studies among patients with PC indicate that social support leads to better mental health (Lepore & Helgeson, 1998), less psychological distress (Eton, Lepore, & Helgeson, 2001), and even prolonged survival (Krongrad, Lai, Burke, Goodkin, & Lai, 1996). A major source of social support is the direct personal social environment, where the major influence is that of the spouse (Kornblith et al., 1994).

In order to consider the communication patterns in couples with men diagnosed with PC, Arrington et al. (2005) conducted a qualitative research study interviewing men and their spouses who attended support groups for both spouses and patients, and a separate group of just patients over a two-year period, and concluded that PC survivors and their wives benefit from social support received through attending meetings and talking with other PC survivors and their spouses throughout the cancer experience. Social support was conceptualized as information exchanged back and forth between patients and their spouses.

Balderson and Towell (2003) assessed 94 men in various stages of PC to identify the prevalence of psychological distress and factors that predict distress. Physical well-being, functional well-being, and social/family well-being significantly predicted levels of psychological distress in men with PC. They concluded that health professionals should be aware of the potential for psychological distress in patients exhibiting poor physical functioning and those with apparent deficits in social or family support.

Bertero (2000) assessed 218 men and women to identify the types and sources of social support available to people afflicted with breast and prostate cancer. The social support network of adults with cancer was found to include: spouses/partner, family, friends, other non-professionals, and professionals. The average number of people in

each network was eight for most respondents (a small size). Overall, the respondents reported a high amount of perceived total functional support concerning affect, affirmation, and aid; the difference between being male or female and being married or unmarried was statistically significant. No difference in the perception of support between married and unmarried respondents was found. Women scored higher in emotional support on the Norbeck Social Support Questionnaire (self-report instrument designed to measure multiple dimensions of perceived social support) than did men, and this difference was statistically significant.

Poole et al. (2001) assessed 142 patients with PC who were attending a support group and 92 patients who were not attending to ascertain their sources of emotional, informational, and practical support, and the relationship between their satisfaction with this support and their self-reports of coping and quality of life. Attenders were significantly more likely to cite other patients as sources of all three types of support. No differences were found between attenders and non-attenders regarding coping strategies, quality of life, or satisfaction with the three types of support. Satisfaction with social support was significantly correlated with coping and quality of life.

Ptacek, Pierce, and Ptacek (2002) explored the links between coping and psychological outcomes among 57 patients with PC. Analyses revealed that the associations among coping, psychological distress, and marital satisfaction depended on the supportive context in which survivors were coping. The association between seeking support and marital satisfaction was strong and positive for men with high perceptions of support but was fairly weak and negative for men with low perceptions of support.

Queenan, Feldman-Stewart, Brundage, and Groome (2009) designed a study to test the hypotheses of a relationship among (a) functional social support and HRQoL, (b) structural social support and HRQoL, and (c) structural social support and functional social support in men with PC. These researchers concluded that perception of support (functional) is more important than the amount of support (structural).

Roberts, Lepore, and Helgeson (2006) examined whether social support might enhance HRQoL for patients with PC by improving their ability to cognitively process their cancer experience. The researchers used the Social Provision Scale (SPS) to assess men's level of perceived social support (defined as advice or information, recognition of one's competence, and emotional closeness) and concluded that supportive social relations may improve mental functioning by helping men cognitively process their PC experience, and thereby enhance HRQoL.

Scholz et al. (2008) investigated whether the provision of support by spouses and the receipt of this support by the patients are beneficial in terms of patients' reported HRQoL, also whether a moderating role of baseline HRQoL is evidenced where benefits of providing and receiving social support are accentuated in patients with initially lower HRQoL. Patients with lower HRQoL at two weeks after surgery benefitted more from receiving support from their partners in terms of HRQoL six months later than patients with a higher HRQoL in the beginning.

In summary, ample evidence exists that social support is an important correlate of well-being in patients with PC. Researchers have investigated the impact of being diagnosed with PC using HRQoL as the outcome variable, which, while helpful, may not be the best measure. Well-being as described by Ryff (1989) may be more suitable as an

outcome measure for patients diagnosed with PC. Well-being is likely to be affected by psychological and social processes that unfold over time as men manage, learn from, and adjust to the changes caused by PC and its treatments, and, thus, further exploration of how social support influences the psychological well-being of men with PC is needed.

Social support relevant to gender. Relevant to the gender script of emotional expressiveness and adjustment to PC, research indicates that men prefer and seek different types of support and assistance than women when faced with a major life stressor, such as cancer. In one study, men were found to be more receptive than women to the empathic support provided by nurses (Dakof & Taylor, 1990). In another study, men were found more likely to confide in only one other person, whereas women confided in several people (Harrison, Maguire, & Pitceathly, 1995). Leiber and colleagues (1986) reported that men acknowledge the somatic and behavioral impacts of their illnesses, but not its impact on their emotions or need for affection.

While social support has been noted to positively influence health in general, reports indicate support may function differently for men and women. Men are reported to rely primarily on their partners, and men may also place different value on the various aspects of social support than do women. Relevant to this finding is a recent study comparing breast and prostate cancer support groups, which showed that the men were more concerned with issues of information and instrumentality while the women were more concerned with emotional support (Gray, Fitch, Davis, & Phillips, 1997). Men embracing traditional masculinity may not express the need for support because they believe either that help is unwarranted or that asking for help is inappropriate. Seeking

help might be seen to be inconsistent with self-reliance, and may be thought to signify weakness (Gray et al., 2000).

Within the context of social support patients diagnosed with PC who are married might perceive their spouses as their primary means of social support. Separating the various aspects of social support and the role of the spouse in the area of support is difficult. Additionally, the quality of the relationship with the spouse is more complex to analyze than simply assessing marital status. Marital adjustment is an additional psychosocial variable to explore in relation to psychological well-being for the patient diagnosed with PC.

Marital satisfaction/marital adjustment. Marital status simply reflects whether one is, or has been married, whereas marital satisfaction (adjustment) refers to spouses' subjective evaluations of their marriage relationships. Additionally, marital interaction refers to objective samples of behavior, usually obtained through observation, which provides evidence of the ways in which spouses interact with one another (Burman & Margolin, 1992).

Historically, marital satisfaction has been examined by researchers in order to assess marital relationship, and it is one of the most studied phenomena in marriage and family research. Marital satisfaction is, however, rarely defined theoretically in the research. Rather, researchers allow its definition to vary according to how they interpret satisfaction, and struggle to operationalize the variable. It is indirectly assessed in the marriage and family literature by implying that marital satisfaction is the state of a non-distressed relationship. "A satisfying marriage is not merely a relationship characterized by the absence of dissatisfaction, as is implied by the routine use of the term non-

distressed, to describe a couple who are maritally satisfied” (Bradbury, Fincham, & Beach, 2000, p. 973). Some researchers define marital satisfaction as an individual’s contentment with the emotional interactions, experiences, and expectations of his or her married life. The first part of the definition focuses on emotional satisfaction and defines the emotional state of marital satisfaction as being content with the interactions between partners. The second part of the definition focuses on the actual interactions between the couple and includes all experiences, influences, relationships, and emotions shared between partners (Ward, Lundberg, Zabriskie, & Berrett, 2009).

Considering the positive benefits of being married, numerous investigations, beginning decades ago, showed that married people live longer and generally are more emotionally and physically healthy than unmarried people (Burman & Margolin, 1992; Coombs, 1991). Being married seems to be especially beneficial for men with regard to several domains of well-being and HRQoL (Coombs, 1991). This effect is mainly attributed to social support processes that occur between married couples (Cohen & Wills, 1985).

Since early research pointed to marriage as having a positive effect on health and well-being, understandably marriage and its relationship to family functioning among adults with illness has recently become a focus of study. The relationships between illness and marital status and satisfaction have been reported, with some studies pointing to the general association between unmarried adults and higher mortality risk, and other investigators finding that married adults are healthier and live longer than unmarried adults. While these studies have primarily focused on mortality risk, mounting evidence suggests that marital status and satisfaction may be important correlates of psychological

adjustment during illness. In general, married adults and those who have higher levels of marital satisfaction report fewer psychological distress symptoms than adults who are unmarried or less satisfied with their marriages (Burman & Margolin, 1992; Manne et al., 2004; Parker, Baile, de Moor, & Cohen, 2003; Rodrigue & Park, 1996).

Additional studies of general populations of healthy adults consistently reported higher levels of physical and mental well-being among married people compared to unmarried people. Researches have suggested that marriage provides general support against illness or acts as a specific buffer that neutralizes stress-producing illness. These findings are also consistent with studies of populations suffering from chronic illness. Data on adjustment and survival showed that married people adapted better than non-married people to chronic disease in every age group across both genders. Some researchers have argued that marital adjustment is an important component of the social support process and to subsequent psychological adjustment to cancer (Badr & Taylor, 2008; Baider, Walach, Perry, & Kaplan De-Nour, 1998).

When investigating whether marriage protects some people against health problems, the converse should also be considered, as poor marriage quality might place some patients at risk. Marriages can be a source of conflict and strain that increases stress, and reduces level of support, for both the well and the sick spouse (Baider et al., 1998; Manne, 1999). These considerations highlight the need for researchers to more thoroughly examine the nature or quality of the marital relationship in order to more fully understand how it impacts well-being.

Researchers have suggested that there are differences in the ways men and women access and view social support. Gender differences are thought to exist in social support

utilization and dyadic (couple) functioning. Men are less likely than women to seek outside social support or psychological services and are more likely to rely on their spouses for support (Revenson, 1994). In contrast, women are inclined to use several different sources of support simultaneously (Nicholas, 2000). How quality of the marital relationship differentially affects the psychological adjustment of men with PC is not known precisely. No consistent patterns were identified regarding the role of gender in examining the relationship between marital variables and adjustment to illness (Burman & Margolin, 1992).

Studies have been conducted assessing cancer patients' perception of marital satisfaction following a diagnosis of cancer. These studies have not quantified the extent of the impact of cancer upon the patient's marital relationship. Researchers have employed a self-report assessment survey and have reported the concerns of patients with cancer (Baider, et al., 2003; Banthia, et al., 2003; Manne, 1998). A more accurate assessment of the impact of cancer on the marital relationship would ideally require assessment of the quality of the patients' marriage prior to diagnosis. Given the difficulty obtaining this type of data, only retrospective recall data is available; patients are asked to rate their recollection of the marital relationship prior to cancer onset.

Rodrigue and Park (1996) asked three questions relevant to the functioning of patients with cancer. First, in considering social support, is marital status associated with general and illness-specific psychological adjustment? Secondly, considering the stress-buffering effects of social support, are married adults with cancer who report low marital quality vulnerable for general illness-specific adjustment problems compared to their happily married counterparts? Finally, do marital status and/or quality differentially

affect women and men with cancer? The study provided empirical support for the positive effect of social support within the context of marriage. Unmarried adults reported more difficulty adjusting to some aspects of their illness than did married adults. Unmarried patients reported more feelings of sadness, reduced self-esteem, and body image problems than married patients. Unmarried men reported more vocational and extended family problems resulting from their illness than all other patients. In contrast to other research findings, this study indicated that men, not women, may be at higher risk for both general and illness-specific psychosocial adjustment difficulties, marital quality effects being more pronounced for men with low marital quality. A significant finding was the relatively high percentage of distressed adults who were unmarried or reported low marital quality, suggesting unmarried adults with cancer and those who are married, but who report low marital quality, especially men, may be at higher risk for adjustment problems while receiving treatment for cancer.

Researchers assessed patients with PC in order to identify the factors that contribute to psychological adjustment two or more years post-treatment. Dyadic adjustment, threat appraisal, and coping style were found to play a significant role in the long-term psychological adjustment of patients. The results also suggested that ongoing sexual dysfunction has a significant impact on psychological adjustment, and that the level of perceived threat, the use of emotion-focused coping strategies, and dyadic adjustment, play significant roles in the level of mood disturbance experienced (Wootten et al., 2007).

Banthia and colleagues (2003) examined the relationship between coping and distress in couples faced with PC, considering dyadic functioning as a third variable that

potentially moderated or mediated the relationship. To investigate the influence of dyadic functioning on the success of patients' and spouses' coping efforts, both moderator and mediator models were tested using couples' composite dyadic adjustment scores. Only the moderator model was supported for patients; dyadic strength moderated the effects of avoidant coping and intrusive thinking on mood disturbance. Despite maladaptive coping, patients who were members of stronger dyads reported less distress than those in more dysfunctional relationships. Findings suggest that the relationship between coping and distress depends on the quality of dyadic functioning and that being part of a strong dyad may serve as a buffering factor, implying greater need for attention to anticipation of potential problems of couples in maladjusted relationships (Banthia et al., 2003).

Since the incidence of PC is correlated with age, and members of elderly couples, particularly those that are post-retirement, are likely to spend most of their time with their partners, the spousal relationship may become especially salient following the diagnosis of cancer when the need for support significantly increases. The partners of patients with cancer assume a dual role as they become the primary providers of support for their spouses who have cancer while experiencing their own needs for support (Revenson, 1994).

In spite of the number of studies that have examined the marital relationships of patients who have been diagnosed with PC, few, if any, have specifically examined the relationship of marital adjustment along with social support and emotional expressiveness and their relationship to psychological well-being.

Emotional expressiveness. Increasingly, literature points to the adverse consequences of men's adherence to masculine scripts on their health and health-related behaviors. Men enacting traditional masculine scripts resulting in emotional restraint are four times more likely to die from coronary heart disease than are more expressive peers (Sher, 2004); emotionally restricted men suffer more severe heart attacks and delay seeking treatment longer than do men scoring low in this characteristic (Helgeson & Lepore, 1997). Studies and other research emphasize masculine gender scripts as an important correlate of health outcomes and health-related behaviors of men. Gender scripts, and in particular, the script for emotional control, may be relevant to understanding men's adjustment to PC.

Men's adherence to the script for emotional control may be significant for men with PC (Helgeson & Lepore, 1997) because men with PC experience strong and overwhelming feelings as they deal with changes resulting from the disease and decreased control over bodily functions (Pirl & Mello, 2002). Many men manage their emotional reactions to these symptoms independently without voicing their concerns (Hedestig, Sandman, Tomic, & Widmark, 2005). Researchers have suggested that traditionally, men have difficulty expressing their feelings and need for support (Leiber, Plumb, Gerstenzang, & Holland, 1976), often limiting communication only to those who "need to know," such as employers or partners. Emotional inexpressiveness diminishes avenues of support, which might ultimately have enhanced the patient's sense of well-being (Harrison, et al., 1995).

These researchers emphasized emotional control as a potential negative correlate of adjustment to treatment for PC. Men who used emotional control to manage their

feelings seemed to fail to express vulnerabilities that elicited support, leaving them to cope with their emotions alone, thus increasing their risk for poorer psychological adjustment (Addis & Mahalik, 2003; Burns & Mahalik, 2007). Emotional expressiveness may be an important and neglected factor that could lead to better understanding of the well-being of men diagnosed with PC.

Although few researchers explore the impact of men's adherence to societal mandates for emotional control on their adjustment to PC, evidence does suggest that emotionally controlled men who coped with PC through emotional restriction demonstrated poorer mental health than did less restricted peers (Burns & Mahalik, 2007). Roesch et al., (2005) reported that emotionally inexpressive men demonstrated poorer psychological and physical health.

The ability to express emotions may be particularly important when faced with a distressing event, such as being diagnosed with PC. Inhibiting one's emotions has been associated with poorer mental health, and emotional inhibition has been associated with a reduced willingness to self-disclose among men (Helgeson & Lepore, 1997). Men with PC are noted to experience strong and overwhelming feelings as they deal with changes resulting from the disease and decreased control over bodily functions (Pirl & Mello, 2002). It is reported that many men manage their emotional reactions to these symptoms independently without voicing their concerns (Hedestig et al., 2005). Others cannot provide help to men who are not able to articulate their needs.

Other researchers contribute to the literature supporting the notion that men with PC are affected adversely by the masculine script of emotional control. One study reported that only 10% of PC participants living with partners confided in their partners

about emotional difficulties (Helgason et al., 1997). Another study indicated that none of the cancer survivors interviewed willingly initiated discussions about their emotions (Hedestig et al., 2005). Researchers reported that men with cancer expressed less emotion than women with cancer (Quartana, Schmaus, & Zakowski, 2005). Another study reported that men seldom share their prostate-related health concerns and fears with their wives (Boehmer & Clark, 2001). Although few studies explored the impact of men's adherence to scripts for emotional control on their adjustment to PC, the evidence does suggest that emotionally controlled men show poorer psychological adjustment than men who are emotionally expressive.

In addition to psychosocial variables such as social support, marital adjustment, and emotional expressiveness, a number of demographic and medical variables are noted to be important when studying men diagnosed with PC. These include: age, income, length of time since diagnosis of PC, stage of cancer, treatment, comorbidities, prior history of cancer, and history of depression.

Demographic Variables

Age. Prostate cancer is typically a disease of older men with the incidence increasing in men over 75. As adults age, they encounter developmental changes that cause stress, such as retirement, caring for aging parents, and physical changes related to aging and the development of co-morbid conditions. Also, older individuals are at increased risk of functional disability and have a greater risk of developing cognitive changes.

Some researchers have shown that younger individuals (under 65) compared to older individuals diagnosed with PC have a greater risk for developing psychological

problems. Lintz et al. (2003) investigated the support care needs of men with PC and levels of psychological morbidity and quality of life associated with their illnesses. Quality of life (as measured by EORTC QLQ-C30 Quality of Life Measure plus Prostate Module) was most negatively impacted in those who were less than 65 years old, had been diagnosed within one year, or had metastatic disease. An age less than 65 years old was reported as one of the factors important in predicting patients more at risk for decreased quality of life. Additionally, younger individuals with cancer have lower quality of life and more life disruptions. Overall, studies examining age in a variety of populations have provided inconsistent findings (Harden et al., 2008).

Income. The influence of income on psychological well-being has been understudied. Few researchers assess differences in economic or employment status following a cancer diagnosis. Those that did explore these factors assessed differences at one time point rather than over time. These studies did not reveal any significant difference in economic or employment status following diagnosis of cancer (Foster et al., 2009). Researchers have not reported on the influence of income when studying men with PC, therefore, including this variable in my study is important.

Summary, Knowledge Gaps, and Limitations of Prior Research

This literature review reflects analysis of 35 research articles out of a review of 98 relevant articles on quality of life research investigating men diagnosed with PC. Further research is needed in order to examine the factors that influence psychological well-being in men diagnosed with PC. Previous research has focused primarily on quality of life outcomes that focus more on physical symptoms and basic mental states such as general sadness or anxiety rather than a fuller and more comprehensive examination of

psychological well-being as defined by Ryff (1989). Previous researchers have shown evidence for the influence of social support, marital adjustment, and age, but these variables remain understudied, and little to no research has been conducted on how income or men's emotional expressiveness influences well-being.

Social support and marital satisfaction are clearly represented in the literature as important variables associated with psychological adjustment and quality of life or well-being in cancer patients (Dunkel-Schetter, 1984; Goodwin, Hunt, Key, & Samet, 1987; Helgeson, 2003; Krishnasamy, 1996; Parker et al., 2003; Poole et al., 2001; Reynolds & Kaplan, 1990; Wootten et al., 2007; Wortman, 1984). Specifically, social support and marital relationship appear to play key roles in psychological well-being in patients with PC (Balderson & Towell, 2003; Helgeson & Cohen, 1996; Ptacek, Pierce, Ptacek, & Nogel, 1999; Roberts et al., 2006; Visser et al., 2003).

The concept of social support has been around for a long time, but is relatively new in studies of health and disease. The literature provides varying non-standardized definitions, yet, despite this problem, social support can be said to have a positive outcome on physical health and mental well-being (Wortman, 1984). In spite of this generally accepted notion, little detailed research on the effects of social support on the psychological well-being of patients with PC has been done. Therefore, better understanding of the nuances of social support and also the expression of emotion and marital adjustment effects on men with PC is needed.

While social support would seem to have positive effects on health and well-being, it can add to the patient's distress. Having spouses who react with fear and show feelings of aversion toward the patient with cancer, may subsequently lead men with PC

to often avoid open communication, resulting in feelings of abandonment and rejection (Wortman, 1984). While factoring in the effects of marital relationships adds even more complexity to the already complex concept of social support in patients with PC, it is nevertheless a potentially critical consideration. Some researchers have argued that marital quality is a major component of the support process (Revenson, 1994).

Marriage is a primary relationship, often considered distinct from other family relationships because it is long-term, affords a central role identity, and provides a fundamental resource of social support (Revenson, 1994). Evidence suggests improved well-being, better health, and better adjustment to stressors in persons living in close relationships (Burman & Margolin, 1992). This effect is assumed to be partially due to an increased availability of support in couples during stressful episodes such as a health crisis (Manne, 1999; Revenson, 1994). A significant research finding has been the relatively high percentage of distressed adults who were unmarried or reported low marital quality. This suggests that unmarried adults with cancer and those who are married, but who report low marital quality, especially men, may be at higher risk for adjustment problems while receiving treatment for cancer (Rodrigue & Park, 1996).

Previous studies have not clarified whether the benefits of social support may be the result of having a partner available to offer support and assistance or whether other aspects of perceived support are also important. Additionally, researchers have typically examined either marital status or social support alone rather than marital satisfaction and social support together, and therefore, have not clarified whether the benefits of social support may be the result of having a partner available to offer support and assistance or whether other aspects of support are also important. Thus far, no studies have examined

the unique roles of social support and marital adjustment; more information is needed to understand the mechanisms by which social support and marital adjustment contribute to the psychological well-being of patients with PC.

Enactment of masculine gender scripts (such as emotional expressiveness) has been reported to be associated with risky health-related behaviors including poor use of preventive health care and less willingness to consult medical and mental health care providers (Addis & Mahalik, 2003). These behaviors are particularly relevant to understanding men's adjustment to diagnosis of and treatment for PC.

Researchers indicate that men with PC experience powerful and overwhelming feelings as they contend with changes in their health and diminished control over bodily function, including erectile dysfunction and incontinence. For many men, emotional reactions to these symptoms are managed independently and seldom voiced (Hedstig et al., 2005). Therefore, findings, though limited in number, suggest the importance of men's emotional control as a potential negative correlate of adjustment to PC. This unwillingness to express feelings may leave men to cope with their emotions alone and increase their risk for decreased well-being. Research is needed to examine emotional expressiveness at present, because it is a neglected factor in research about PC, therefore it is necessary to study it in order to increase our understanding of its significance. Doing so can lead to a better understanding of the well-being of men who are diagnosed with PC.

Evidence links perceived social support and marital status/satisfaction to quality of life, but little to no research has been conducted on the relationship between these factors and psychological well-being. Emotional expressiveness in particular is an

unexplored factor in men with PC, and emotional inexpressiveness may impact negatively on well-being if men who adhere to traditional masculine gender scripts are making treatment decisions with limited capacity to express fears and concerns that are associated with PC.

Studying the psychological well-being of men can benefit psychotherapists, researchers, medical professionals, educators, and even more importantly, patients diagnosed with PC. Gaining a deeper understanding of factors influencing men's well-being can facilitate evidence-based practice in psychotherapy. Evidence suggests that improved psychological well-being may in turn act as a protective factor against adverse events and stress (Ryff, Singer, & Love, 2004).

Purpose of the Study

I was interested in examining the influence of social support, marital adjustment, and emotional expressiveness on the psychological well-being of men with PC. The high prevalence rate of men suffering from a diagnosis of PC is a continuing social and health concern. Given the number of men who are diagnosed with PC and the lack of understanding of the experience of this large group of men, clearly further research is needed. The purpose of the study was to examine relationships between social support, marital adjustment, emotional expressiveness, and psychological well-being among men diagnosed with PC. Specifically, the following research question was addressed: How do social support, marital adjustment, and emotional expressiveness impact the psychological well-being of men diagnosed with PC?

I hoped that the data collected for this study would help professionals to have a better understanding of factors that contribute to the psychological well-being of men

with PC. Emotional expressiveness is a largely unexplored factor in patients with PC. Not known was to what extent middle-aged and elderly men share their emotional concerns, nor whether this proportion changes after the men have been diagnosed with PC due to efforts by healthcare personnel or others to offer emotional support. Also unclear was if sharing emotional concerns affects well-being in this age group of men. In order to address gaps in previous research, I evaluated a sample of married/partnered men diagnosed with PC in order to examine selected psychosocial correlates of psychological well-being, including emotional expressiveness.

Chapter 3: Research Methods

Research Design

This cross-sectional study used internet survey methodology to determine which psychosocial variables are predictors of psychological well-being among men diagnosed with PC. Research design and methods were formalized based on prior research literature, psychological well-being theory, and purpose of the study. A description of the research design and methods used in the study are presented in this chapter.

The purpose of the study was to examine how various research-based factors influence men's psychological well-being. More specifically, the purpose of the study was to examine correlates and predictors of overall psychological well-being (Ryff, 1989) in a sample of men diagnosed with PC. Independent variables included three psychological factors—social support, marital adjustment, and emotional expressiveness. Data analyses were used to examine these three predictors and the criterion variable—total psychological well-being. In this chapter the participants, measures, operational definitions of variables, hypothesis, study design, procedure, and data analyses of the study will be described.

Study Design

A descriptive, cross-sectional survey research study was conducted based on the research question: What is the relationship between social support, marital adjustment, emotional expressiveness, and psychological well-being among men diagnosed with PC?

Participants

The study population consisted of men diagnosed with PC. These men were in the process of making decisions or having already made decisions regarding treatment (e.g., watchful waiting, surgery, chemotherapy, radiation, or hormone therapy). Participants were eligible if they were men who (1) had ever been diagnosed with PC, (2) were married or co-habiting, and (3) were 18 years of age or older. Participants were excluded if they were age < 18 or had a prior diagnosis of another type of cancer.

Procedure

This study was submitted to the University of Kentucky (UK) Institutional Review Board (IRB) for approval. Enrollment began May 22, 2014 and ended December 31, 2014.

Potential participants were recruited online through PC websites and social media pages such as Facebook and various PC blogs. The administrators of these sites were contacted and asked to share the link to the online survey. The following websites and social media outlets were contacted: Us TOO, Malecare, Zero Cancer, Prostate Cancer Foundation, His Prostate Cancer, Prostate Cancer Survivors Speak, Prostate Snatchers, and The Prostate Decision.

Blog and website administrators were asked to share standardized information about the study (See Appendix I), and the link to the survey was subsequently posted on different websites and other social media outlets. When the link was posted on Facebook, readers “shared” or “liked” the posting, leading to a snowball-like effect of information spreading about the study. When the readers clicked that they “liked” or “shared” the link, this meant that their friends were able to see the study survey link. Although this

could be considered a breach of privacy, it was assumed that people who use social media understand that “liking” or “sharing” a link meant that their friends would see this action. However, merely clicking on the survey link (without clicking “like” or “share”) would not breach confidentiality, so people could participate in the study via a link from social media and still maintain their privacy if they chose to do so. The exact phrases that were used to ask blog and Facebook page administrators for permission to post the link to the survey were specified (See Appendix I).

RedCap survey software was used to administer the survey electronically. RedCap has a feature that allows the investigator to block multiple responses from the same computer machine. This ensured that each participant only filled out one survey.

Subjects clicked on the link to the RedCap survey, which brought them to an informed consent document (See Appendix H) and two items that assessed their eligibility. A consent form cover letter appeared and participants were asked to check “I agree” after reading in order to access the survey. After confirming eligibility and reading the consent document, readers were asked to complete the survey. The survey took about 30 minutes to complete. At the end of the survey, readers were given the email address of the principal investigator to contact if they wanted to request a summary of the results or submit any other comments.

During the enrollment period, some participants contacted the researcher requesting a paper and pencil version of the electronic survey. These participants expressed difficulties accessing the survey and participating electronically. An IRB modification was approved to administer a paper and pencil version of the survey. Participants who requested a paper version of the survey were provided a mailing

envelope to return the survey. There were no identifying data on the survey. The pencil and paper version included a top cover consent letter which asked participants to check a box to indicate their willingness to participate. The participants were then instructed to tear off the top page of the survey and keep it for their records and reference (See Appendix H). The principal investigator (PI) was invited to speak at the Lexington and Louisville support group meetings in order to discuss the study and help participants complete the survey.

Only individuals listed on the IRB list of investigators who had up-to-date training in human subjects' protection and study procedures had contact with the data and participants. The consent included information on how to contact the University of Kentucky Office of Research Integrity (UK ORI) and the PI to discuss any complaints.

Instrumentation

Dependent and independent variables were operationalized through established scales based on prior research. The individual measures can be found in Appendices A through F. The entire questionnaire used in the study is presented in Appendix G. The following section includes descriptions of the six instruments that were used in the study: (a) demographic questionnaire, (b) Visual Analog Scale (VAS) of Perceived Social Support, (c) Dyadic Adjustment Scale (DAS) (Spanier, 1976), (d) Expression of Emotion Scale (EOM) (Balswick, 1988), (e) the Scales of Psychological Well-Being (SPWB) (Ryff, 1989), and (f) Patient Health Questionnaire -2 (PHQ-2). Psychometric properties for each instrument are presented in this section except for the demographic questionnaire.

Demographic questionnaire. The demographic questionnaire was made up of 12 items. Demographics included: age, race/ethnicity, household income, employment, education, religious affiliation, stage of cancer, time since diagnosis, type of treatment, co-morbidities, medications, and past psychiatric history (i.e., depression) (See Appendix A.)

Age. Participants were asked to provide their age in years.

Rationale. Similarities and differences in psychological well-being scores have been found according to different ages (Ryff, 1989; Ryff & Keyes, 1995; Ryff & Singer, 2006). This category was used to describe participants.

Race/ethnicity. Race/ethnicity was measured with one item in which participants identified their race/ethnicity as 1 = *Caucasian (White)*, 2 = *African American*, 3 = *Hispanic/Latino*, 4 = *Asian*, 5 = *Native Hawaiian or other Pacific Islander*, 6 = *American Indian/Alaskan Native*, or 7 = *Other*. These categories were used to describe participants.

Education. Education was measured with one item in which participants identified their education as 1 = *Less than high school graduate*, 2 = *High school graduate/GED*, 3 = *Some college*, 4 = *Associate's Degree*; 5 = *Bachelor's degree*; 6 = *Master's degree*, 7 = *Doctoral studies*, 8 = *Doctoral degree*. These categories were used to describe participants.

Income. Participants were asked to identify their level of household income. Levels were designated as follows: 1 = *Less than \$20,000*, 2 = *\$20,001-\$39,999*, 3 = *\$40,001-\$59,999*, 4 = *\$60,000-\$79,999*, or 5 = *\$80,000 and over*. These categories were used to describe participants.

Rationale. Investigators have proposed that income levels may have an influence on psychological well-being. As income increases, the level of stress to meet basic needs decreases, thus possibly influencing psychological well-being in a positive manner (Clarke et al., 2000). Each of the levels of household income represent distinct differences in quality of life ranging from striving to meet basic needs (less than \$20,000 for a family of four is considered below poverty), being able to meet basic needs (living above the poverty line), living comfortably, living beyond a comfortable level, and living exceptionally comfortably. These five categories were used to describe participants.

Independent variables. Psychosocial variables that predicted psychological well-being were measured and can be found in Appendices B - D.

Social support. The Visual Analog Scale (VAS) of Social Support was adapted from the Self-Anchoring Striving Scale by Cantril (1963). (See Appendix B). This measure of social support has not yet been validated; however, VASs have been used extensively in order to describe global and subjective phenomenon. Visual analog scales have been used to assess various subjective phenomena including pain, fatigue, and dyspnea. Visual analog scales assess subjective and global levels of a construct perceived by the participant; thus, a global perception of social support is obtained with this assessment.

Single item measures have a number of advantages: simplicity of format, ease of administration, efficiency, and sensitivity to change over time (Sloan, Aaronson, Cappelleri, Fairclough, & Varricchio, 2002). Alternate form reliability has ranged from 0.65 (Cantril's Self-Anchoring Striving Scale), to 0.97 (VAS/ pain). For the purpose of

this study, social support was conceptualized as patients' rating on the VAS of Social Support with higher scores indicating better quality of social support.

Social support was operationalized by use of a single item measure, the VAS of Social Support. Participants were asked to rate their perception of social support from 1 = *poor* to 100 = *excellent*. Participants were asked to move a cursor to the position on the horizontal line that best described their support on the internet survey. On the pencil and paper test, participants were asked to enter a number between 1 and 100 (where 1 is poor social support and 100 is excellent social support) that best described their social support (family, friends, healthcare personnel, etc.). A space below the scale was also provided so participants could elaborate on the meaning of their response. Participants were asked one open-ended question about their perception of the quality of their social support. Qualitative data concerning participants' perceptions were collected, but will be analyzed in a future study. Participants were asked the following question: "What was the meaning of the number you marked?"

Rationale. Certain types of social support (support from friends and perceived support from family) have been studied and it has been demonstrated that perceived support from family positively influenced psychological well-being (Bierman, Fazio, & Milkie, 2006). A global assessment of social support relative to psychological well-being has not been reported.

Marital adjustment. The Dyadic Adjustment Scale (DAS) is a 32 item scale that was used for assessing the quality of adjustment to marriage and similar dyadic relationships. The 32 items are summed to create a total score ranging from 0-151 with higher scores indicating more positive dyadic adjustments. The DAS measures major

areas of marital satisfaction and dissatisfaction (See Appendix C). The DAS includes four subscales: (a) Dyadic Consensus, (b) Dyadic Satisfaction, (c) Dyadic Cohesion, and (d) Affectional Expression. Dyadic Consensus assesses the extent of agreement between partners on matters important to the relationship such as money, religion, recreation, friends, household tasks, and time spent together. Dyadic Satisfaction measures the amount of tension in the relationship, as well as the extent to which the individual has considered ending the relationship. Higher scores on Dyadic Satisfaction indicate satisfaction with the present state of the relationship and commitment to its continuance. Affectional Expression measures the individual's satisfaction with the expression of affection and sex in the relationship. Dyadic Cohesion assesses the common interests and activities shared by the couple. Each item is scored on only one subscale. A total adjustment score is calculated by summing the scores for the four subscales. Total scale internal consistency reliability has been reported as 0.96. The data indicate that the total scale and its components have sufficiently high internal consistency reliability to justify its use. The temporal stability of the DAS has been shown in a number of studies. One study reported 11 week test-retest correlations for the total DAS of 0.96. Having been utilized in hundreds of clinical and experimental research studies, the validity of the DAS has been well established using a number of different techniques. The weight of the evidence gained from this literature is that the DAS assesses an important construct that has strong explanatory and predictive utility in the characterization of marital and other dyadic relationships (Spanier, 1976).

Spanier (1976) normed the scale on a population of 218 white married persons and 94 divorced persons through the cooperation of four corporations in Centre County,

Pennsylvania. For the purpose of the proposed study, marital adjustment was conceptualized as patients' total Dyadic Adjustment Scale scores with higher scores indicating better marital adjustment. The total score cutoff for marital distress was reported by one group of researchers to be 97 (Jacobson, Schmaling, & Holtzworth-Munroe, 1987), while Crane, Middleton, & Bean (2000) established criterion scores for the Revised Dyadic Adjustment Scale and converted the score for the Dyadic Adjustment Scale cutoff indicator as 107. The Dyadic Adjustment Scale scores of 107 and above represent non-distress and a score of 106 and below indicate marital distress. Scale reliability for the total score was computed in the present study and found to be strong ($\alpha = .94$). The scale reliability for the subscales was also strong ($\alpha = .81$).

Marital adjustment was operationalized by obtaining a total score from the Dyadic Adjustment Scale (DAS) (Spanier, 1976). Each DAS item is rated with one of several responses. The response anchors vary somewhat, depending on the question. Participants rate each item on a scale from 0 to 5 on one of the section of questions (0 = *Always Disagree*, 1 = *Almost Always Disagree*, 2 = *Frequently Disagree*, 3 = *Occasionally Disagree*, 4 = *Almost always Agree*, or 5 = *Always Agree*). On another section of questions, participants rate each item on a scale from 0 to 5 (0 = *All the Time*, 1 = *Most of the Time*, 2 = *More Often Than Not*, 3 = *Occasionally*, 4 = *Rarely*, or 5 = *Never*). The DAS has a theoretical range of 0-151. Items are not reverse scored items on the scale. The format of the scale allows for easy coding or scoring. Higher scores indicate better marital adjustment.

Rationale. Differences in scores on the Scales of Psychological Well-Being have been found based on different types of marital status (Bierman et al., 2006; Clarke et al.,

2000). Married men with PC have reported higher quality of life scores than men who are not married (Rodrigue & Park, 1996).

Emotional expressiveness. The Expression of Emotion Scale (EOE) is a 16 item scale with four subscales (See Appendix D). Four items comprise the subscales representing Love, Happiness, Sadness, and Hate. The scale was developed using factor-analytic techniques that give strong empirical support for the four dimensions of emotion. According to the author (Balswick, 1988), the 16 statements of the EOE Scale seek to measure the extent to which each of the four different types of emotions are expressed by the participant. Balswick's conviction is that the best way (within survey research) to measure something as abstract as emotionality and emotional expressiveness is by directly asking people how they feel certain emotions and how they express these emotions to others.

To complete the EOE scale, participants are asked to respond to each of the 16 statements using a Likert-like format by selecting one of the four categories of *never*, *seldom*, *often*, or *very often*. By giving weights to the response categories from 1 (*never*) to 4 (*very often*), the score for the total scale ranges from a low of 16 to a high of 64. The potential scores for each of the four subscales range from a low of 4 to a high of 16. Eleven research articles have been published in which the scale was used to operationalize emotional expressiveness. Test-retest reliability of the scales is strong, with coefficients of .83 at 1 week for adults ($n = 34$) and .72 at 6 weeks for college students ($n = 33$). Validation for this scale comes from the content nature of the self-report items that do appear to measure the emotional expressiveness of the four proposed emotions as evidenced by the factor structure of the scale. The EOE Scale was normed on

a group of 331 university students. The reliability of the scales was demonstrated with a sample of 34 adults with a one week test/retest interval and with 34 college age students at a six week test/retest interval. Based on the reliability results and factor analysis indicating the loading of four types of emotions on the four emotion scales, the scales were used in questionnaires given to 1245 high school age students and 266 sets of college- aged married students (J. Balswick, personal communication, September 19, 2011).

Emotional expressiveness was operationalized by assessing a total score from the Expression of Emotion Scale (EOM) (Balswick, 1988). Participants rated each item on a scale of 1 to 4 (1 = *never*, 2 = *seldom*, 3 = *often*, or 4 = *very often*). Total emotional expressiveness scores were obtained by summing all responses from the 16-item instrument; scores range from a low of 16 to a high of 64. Higher scores indicated more emotional expressiveness. Scale reliability for the total score was computed in the present study and found to be strong ($\alpha = .83$). Scale reliability for the subscales was also strong ($\alpha = .63$).

Rationale. Factor analysis of the EOM scale strongly supports the theoretical soundness of the four dimensions of emotions that make up its subscales. Men have traditionally been defined as independent, task and achievement oriented, objective, competitive, rational, unsentimental, and inexpressive (Balswick, 1988). It is especially important to understand the impact of male emotional inexpressiveness, particularly in men with PC.

Depression. The PHQ-9 and PHQ-2, components of the longer Patient Health Questionnaire, are self-administered tools commonly used for assessing depression. The

PHQ-2, (See APPENDIX F) comprising the first two items of the PhQ-9, inquires about the degree to which an individual has experienced depressed mood and anhedonia over the past two weeks. Its purpose is not to establish final diagnosis or to monitor depression severity, but rather to screen for depression. The stem question is, “Over the past 2 weeks, how often have you been bothered by any of the following problems?” The two items are “Little interest or pleasure in doing things” and “Feeling down, depressed, or hopeless.” For each item, the response options are “Not at all,” “Several days,” “More than half the days,” and “Nearly every day,” scored as 0, 1, 2, and 3, respectively. Thus, the PHQ-2 score can range from 0-6 (Kroenke, Spitzer, & Williams, 2003). A score of three points or more on this version of the PHQ-2 has a sensitivity of 83 percent and a specificity of 92 percent for a major depressive episode (Thibault & Steiner, 2004).

Rationale: Depression may be a confounding variable in men diagnosed with PC in predicting psychological well-being. Therefore, assessing for depression was included in the questionnaire. The abbreviated PHQ-2 form offered a concise method for including this variable.

Dependent variable. The following dependent variable can be found in Appendices E and G.

Psychological well-being. The Scales of Psychological Well-Being (SPWB) is an 18-item instrument designed to measure six theoretically-based dimensions of positive psychological functioning (Ryff, 1989) (See Appendix E). The SPWB is comprised of six subscales: Autonomy, Purpose in Life, Positive Relationships with Others, Personal Growth, Environmental Mastery, and Self-Acceptance. Responses are rated on a 6-point Likert scale: 1 = *strongly disagree*, 2 = *disagree somewhat*, 3 = *disagree slightly*, 4 =

agree slightly, 5 = *agree somewhat*, and 6 = *strongly agree*. Using these 18 items, a total score is obtained by summation and higher scores indicate higher psychological well-being. Total scores for each subscale are obtained by summing the scores of the three items on that subscale. Higher scores on each subscale indicate higher functioning on that dimension of psychological well-being. Thus, total scores range from 18 to 108 for the entire instrument, and 3 to 18 per subscale.

The SPWB was originally validated on a sample of 321 well-educated, socially-connected, financially-comfortable, and physically healthy men and women (Ryff 1989). The internal consistency coefficients for its six subscales were quite high (between 0.86 and 0.93) and test-retest reliability coefficients for a subsample of the participants over a six week period were also high (0.81-0.88) (Ryff, 1989).

Review of literature reporting on the validity of Ryff's SPWB yielded no data on the total scale score leading to further investigation. In fact, Ryff communicated through email, "I know of no data on reliability or validity for the total scale score" (C. Ryff, personal communication, September 27, 2011). Thus, researchers reporting on the psychometric properties of the SPWB have primarily examined the individual scales. For the purpose of the study, psychological well-being was conceptualized as patients' total Psychological Well-Being Scale score with higher scores indicating better psychological well-being. Although there is little evidence demonstrating the use of a total psychological well-being score, the internal consistency for the score in this study was strong ($\alpha = .81$). The internal consistency for the subscales in this study was strong also ($\alpha = .79$).

Psychological well-being was operationalized using Ryff's (1989) Scales of Psychological Well-Being (SPWB). Each dimension of psychological well-being was operationalized by one of the six subscales (Autonomy, Purpose in Life, Positive Relationships with Others, Personal Growth, Environmental Mastery, and Self-Acceptance). Each subscale contained 3 items and the total scale included 18 items. Items from the separate scales were mixed (by taking one item from each scale successively). Participants responded by using a six-point format rating each item from 1 to 6 (1 = *strongly disagree*, 2 = *disagree somewhat*, 3 = *disagree slightly*, 4 = *agree slightly*, 5 = *agree somewhat*, or 6 = *strongly agree*). Responses to negatively scored items (-) were reversed in the final scoring procedures so that high scores indicated high self-ratings on the dimension assessed. After reversing the scores of the negatively worded items a total score of psychological well-being was obtained by summing the scores of all 18 items. Higher scores indicated higher psychological well-being.

Rationale. Psychological well-being was assessed using the 18-item SPWB (Ryff, 1989), a shorter version of the original 84 item SPWB scale developed by Ryff (1989). Based on a review of research literature, the total scale score appeared to be appropriate. Further, no standard or widely accepted measure of psychological well-being exists. The instrument was also supportive of the notion that individuals' mental health is more than a lack of symptom distress, a notion that I support. Third, the model, and in turn, the instrument is a comprehensive assessment of several areas of positive psychological functioning that are theoretically-based in the psychology literature.

Research Hypothesis

Based on the literature reviewed, the prevalence of men being diagnosed with PC, and psychological well-being theory, the hypothesis presented in this section was tested in the study.

Hypothesis. Social support, emotional expressiveness and marital adjustment will significantly and positively predict total psychological well-being in men diagnosed with PC. More specifically, it was hypothesized that the total score of psychological well-being would be higher for men diagnosed with PC who have higher social support, emotional expressiveness and marital adjustment,.

Rationale for hypothesis. Social support has been shown to positively influence psychological well-being (Wills & Shinar, 2000). Social support and marital adjustment are clearly presented in the literature as important variables positively associated with psychological adjustment and well-being in cancer patients (Dunkel-Schetter, 1984; Goodwin et al., 1987; Helgeson, 2003; Krishnasamy, 1996; Parker et al., 2003; Poole et al., 2001; Reynolds & Kaplan, 1990; Wootten et al., 2007; Wortman, 1984). Social support has been shown to positively influence psychological well-being (Wills & Shiner, 2000).

Researchers have concluded that primary social relationships and the coping resources they provide are essential in managing stress and, thereby, in influencing both psychological and physical health. Psychosocial factors, such as social support and interpersonal relations are widely recognized to affect adjustment to cancer and provide psychological benefit. Studies note a positive relationship between emotional support from family members and the degree of physical and psychological management of

cancer (Taylor et al., 1986). Other studies indicate that social support at the time of diagnosis is associated with less emotional distress and longevity. Collectively, the consensus of research to date indicates that social support aids coping and is critical to cancer patients' psychosocial well-being (Carlsson & Hamrin, 1994; Cobb, 1976; Ell et al., 1992; Parker et al., 2003; Taylor et al., 1986).

Specifically, social support and marital adjustment appear to play key roles in well-being in patients with PC (Balderson & Towell, 2003; Banthia, et al., 2003; Helgeson & Cohen, 1996; Ptacek et al., 1999; Roberts et al., 2006; Visser et al., 2003). Considering the positive benefits of being married, numerous investigations, beginning decades ago, show that married people live longer and generally are more emotionally and physically healthy than unmarried people (Burman & Margolin, 1992; Coombs, 1991). Being married seems to be especially beneficial for men with regard to several domains of well-being and HRQoL (Coombs, 1991). This effect is mainly attributed to social support processes that occur between married couples (Cohen & Wills, 1985). Communication between married couples is a primary factor contributing to the social support processes. In addition, previous research has shown adherence to traditional masculine gender scripts as a potential negative correlate of adjustment to treatment for PC, and that men who are more emotionally expressive have better health outcomes than men who are emotionally restricted (Addis & Mahalik, 2007; Burns & Mahalik, 2007; Helgeson & Lepore, 1997; Sher, 2004).

Data Analyses

Data analyses were conducted using SPSS v. 20 (SPSS Inc., Chicago). A p value of less than .05 was considered significant. Patient characteristics were described using means and standard deviations or frequency distributions.

Descriptive statistics were used to examine study variables. Preliminary analyses were conducted to test assumptions for regression. Outliers were identified, examined, and none were removed. Correlations between the variables were examined for degree of correlation among the predictor variables. Normality, linearity, homoscedasticity, and independence of residuals were checked from the residuals scatterplots that are generated as part of the multiple regression procedure. There were a number of items on the DAS that participants did not complete. Missing data was handled by replacing the missing score with the average score for that variable and then that case was included in the analysis. This added another 13 cases totaling 53 compared to 40. After preliminary analyses, several types of analyses were used to test the hypothesis. For hypothesis testing, a .05 alpha level was used to determine significance.

A hierarchical regression was conducted. The independent variables were entered in two steps: Step 1) social support and emotional expressiveness; and Step 2) marital adjustment. Marital adjustment was entered in Step 2 to assess what it added to the prediction of psychological well-being after social support and emotional expressiveness had been controlled for, thus assessing the relative contribution of each of the variables.

Chapter 4: Results

Sample Characteristics

The final sample consisted of 71 men diagnosed with PC. The mean age of men in the sample was 69 ± 8.65 years of age. The sample was primarily Caucasian, and most men were married and retired. More than half of the men had incomes of \$60,000 and greater, approximately seventy-five percent held a Bachelor's degree or above, and approximately eighty percent reported no symptoms of depression.

Levels of Psychological Well-Being, Social Support, Emotional Expressiveness and Marital Adjustment

The Psychological Well-Being mean scores for the entire sample were 86 ± 11.96 with a range of 60-105 indicating higher levels of psychological well-being. Social Support mean scores were 86 ± 22.07 with a range of 1-100, indicating higher levels of social support. Emotional Expressiveness mean scores were 39 ± 5.27 with a range of 28-54 indicating higher levels of emotional expression. Marital Adjustment mean scores were 120 ± 15.97 with a range of 72 -150 indicating higher levels of dyadic adjustment. Eighty-three percent of the entire sample was above the 107 point cut off on the DAS, indicating a non-distressed marital relationship. Seventy-five percent of the sample selected a score of 90 or higher in social support on a scale from 0-100, indicating a high level of social support (See Table 4.2).

Regression Results

Hierarchical multiple regression was performed to investigate the ability of social support, emotional expressiveness, and marital adjustment to predict psychological well-being. Preliminary analyses were conducted to ensure there was no violation of the

assumptions of normality, linearity, multicollinearity and homoscedasticity.

Additionally, the correlations amongst the predictor variables (social support, emotional expressiveness, and marital adjustment) included in the study were examined and these are presented in Table 3. All correlations between the independent variables were weak to moderate ranging between $r = .20$ and $r = .36$ ($p < .05$), indicating that multicollinearity was unlikely to be a problem. The correlations between the independent variables and the dependent variable (psychological well-being) were all weak to moderately strong, ($r = .35$ to $.60$; p values $< .01$ to $< .001$), indicating that the data were suitably correlated with the dependent variable for examination through multiple linear regression to be reliably undertaken.

In the first step of hierarchical multiple regression, two predictors were entered: social support and expression of emotion. The model was statistically significant [$F(3, 41) = 11.039$; $p < .001$] and explained 24% of variance in psychological well-being (Table 3:3). After entry of dyadic adjustment at Step 2, the total variance explained by the model as a whole was 45% [$F(2, 42) = 6.518$; $p < .05$]. The introduction of dyadic adjustment explained an additional 21% in psychological well-being after controlling for social support and expression of emotion [R^2 Change = $.21$; $F(1, 41) = 15.56$; $p < .001$]. In the final model, only dyadic adjustment was statistically significant ($\beta = .49$, $p < .001$).

Results of Open Ended Social Support Survey Question

Although analysis of the survey question that sought qualitative information is beyond the scope of this study, the responses were consistent regarding the support the participants received. When participants were asked to explain why they felt the way they did about the number they entered that best described their social support, comments

included: “I have confidence in my professional team. My spouse, children and extended family are all very supportive.” “My wife was very supportive.” “My wife of 45 years has been wonderful.” “My wife. I have strong support from family and friends, excellent doctors and their supporting staff.” “My wife has been extremely wonderful.” “I get much support from wife.” “My wife loves me.” “My friends, family and doctors are very helpful.” “My wife and friends give me support daily in my battle with cancer.”

Table 4.1:

Sample Characteristics

Characteristic	Percentage (n) or mean \pm standard deviation
Age (n = 69)	69.96 \pm 8.656
Ethnicity (n = 69)	
White/Caucasian	88.7% (63)
African American	2.8% (2)
Hispanic or Latino	1.4% (1)
Asian	1.4% (1)
American Indian or Alaskan Native	1.4% (1)
Other or biracial	1.4% (1)
Education level (n= 67)	
Less than high school graduate	1.4% (1)
High school graduate or GED	4.2% (3)
Some college	12.7% (9)
Associate's degree	1.4% (1)
Bachelor's degree	35.2% (25)
Master's degree	22.5% (16)
Doctoral studies	1.4% (1)
Doctoral degree	15.5% (11)
Place of residence (n = 69)	
United States	94% (67)
United Kingdom	2.8% (2)
Marital status (n = 71)	
Married	87.7% (63)
Unmarried cohabitating couple	1.4% (1)
Divorced	1.4% (1)
Widowed	2.8% (2)
Employment status, select all that apply (n = 71)	
Retired	70.4% (50)
Employed full-time	23.9% (17)
Employed part-time	5.6% (4)
Disabled	4.2% (3)
Student	1.4% (1)
Unemployed	1.4% (1)
Homemaker	0% (0)
Financial status (n = 71)	
Less than \$20,000	7% (5)
\$20,000-39,999	18.3% (13)
\$40,000-59,999	2.8% (2)
\$60,000-79,999	38% (27)
\$80,000 and greater	19.7% (14)

Table 4.1 (Continued): *Sample Characteristics*

Characteristic	Percentage (n) or mean ± standard deviation
Religious Affiliation (n = 67)	
None	12.7% (9)
Catholic	28.2% (20)
Protestant	39.4% (28)
Jewish	7% (5)
Muslim	1.4% (1)
Other	5.6% (4)
Family history of prostate cancer (n = 68)	
Yes	32.4% (23)
Don't know	15.5% (11)
How long since first diagnosed (n = 67)	
Less than one month	2.8 % (2)
1-6 months	7% (5)
7-12 months	9.9% (7)
Greater than 12 months	74.6% (53)
Stage of cancer when diagnosed (n = 67)	
Stage 1	67.6% (48)
Stage 2	9.9% (7)
Stage 3	5.6% (4)
Stage 4	4.2% (3)
Don't know	5.6% (4)
Other stage first diagnosed	1.4% (1)
Stage of cancer now (n = 64)	
Stage 1	19.7% (14)
Stage 2	2.8% (2)
Stage 3	2.8% (2)
Stage 4	1.4% (1)
In remission	36.3% (26)
In partial remission	5.6% (4)
Other stage now	8.5% (6)
Don't know stage now	12.7% (9)
Treatment (n= 70)	
Watchful waiting	18.3% (13)
Chemotherapy	8.5% (6)
Radiation	33.8% (24)
Hormone therapy	29.6% (21)
Surgery	43.7% (31)
Undecided	2.8% (2)
Comorbidities (n = 70)	
Hypertension	31% (22)
Diabetes	5.6% (4)
COPD	1.4% (1)
Other	14.1% (10)

Table 4.1 (Continued): *Sample Characteristics*

Characteristic	Percentage (n) or mean ± standard deviation
Depression diagnosis within last 10 years (n = 65)	11.3% (8)
Scores on Patient Health Questionnaire-2 (PHQ-2)	
(n = 66)	
0-2	85.5% (63)
6*	4.5% (3)
Treatment for depression (n = 9)	
Counseling only	4.2% (3)
Medication only	4.2% (3)
Both counseling and medication	1.4% (1)
No treatment	2.8% (2)
Taking any medications for depression (n = 71)	8.5% (6)

*A score of 3 or > indicates cut-off score for underlying depression or anxiety disorder

Table 4.2:

Descriptive Statistics for All Continuous Study Variable Measures

Measure	<i>M</i>	<i>SD</i>	Range	
			Potential	Actual
Scales of Psychological Well-Being (SPWB)	86.32	11.96	18-108	60-105
Dyadic Adjustment Scale (DAS)	119.95	15.98	0-151	72-150
Expression of Emotion Scale (EOM)	39.38	5.27	16-64	28-54
Visual Analog Scale of Social Support (VAS)	86.61	22.07	1-100	1-100

Table 4.3: *Bivariate Correlations among Study Variables*

Bivariate Correlations Among Study Variables

Variables	PWB	DA	EE	SS
PWB	--			
DA	.601**	--		
EE	.440**	.362*	--	
SS	.345*	.166	.337*	--

Note: PWB: Psychological Well-Being; DA: Dyadic Adjustment; EE: Emotional Expressiveness; SS: Social Support. Statistical significance: *p<.05;**p<.01

Table 4.4:

Multiple Regression Model Predicting Psychological Well-Being in Men with PC

	R	R²	R² Change	B	SE	β	t	p
Step 1	.49	.24**						
EE				.83	.33	.37	2.55	.015
SS				.12	.08	.22	1.55	.129
Step 2	.67	.45***	.21***					
EE				.46	.30	.20	1.54	.131
SS				.10	.07	.18	1.46	.153
DA				.37	.09	.49	3.95	.000

EE = Emotional Expressiveness; SS = Social Support; DA = Dyadic Adjustment

Note: Statistical significance: *p<.05;**P<.01;***p<.001

Chapter 5: Discussion

The purpose of this chapter is to summarize and synthesize the findings of this dissertation. This chapter will also advance the state of science in understanding the psychological well-being of men with PC by making recommendations for practice and future research. The results of this study contribute information about how three different factors (social support, emotional expressiveness and marital adjustment influence men's psychological well-being. The findings support information from previous studies, and highlight significant areas for further assessment and study in men diagnosed with PC.

Discussion of Key Results

Social support, emotional expressiveness and marital adjustment were all three independent predictors of well-being when considering the simple bivariate correlations. Surprisingly, I found marital adjustment to be the only significant predictor of psychological well-being in this sample of men with PC when adding marital adjustment in the model in step two; social support and emotional expressiveness no longer predicted well-being. The results from the first step of the regression showed what is perhaps intuitive; social support and expression of emotion are important contributors to the psychological well-being of men diagnosed with PC. What is not so intuitive is that marital adjustment was the only independent predictor of psychological well-being, and social support and expression of emotion were not independent predictors of psychological well-being once marital adjustment was included in the model. However, there were trends towards statistical significance for both (social support, $p = .129$) and (emotional expressiveness, $p = .15$). It is possible that we would have found social support and emotional expressiveness to be significant predictors of psychological well-

being in a larger sample size. Another possible explanation for the non-significance of social support in the model is that there was very little variability in the VAS scores on social support—70% of men endorsed a social support level of 90 or higher (out of 100). Overall, the results of this exploratory study raise more questions than answers, possibly leading to more interesting and more important projects in the future.

In this study, I examined how the quality of a marital relationship affects men with PC, and found that it had an important and independent effect on psychological well-being. My results are consistent with prior researchers' findings in which support within the context of marriage had a positive effect on the psychological adjustment of survivors of PC. Wooten et al. (2006) reported social support as important with dyadic adjustment negatively associated with mood disturbance. My findings are also consistent with Helgason et al. (2001), who reported that men who did not access emotional support from their partner were more likely to experience negative psychological outcomes than those who did.

Wooten et al. (2006) conducted a five-step hierarchical multiple regression to assess the effect of residual symptoms (urinary, sexual), dyadic adjustment, threat appraisal and coping style in predicting psychological adjustment (measured by a total mood disturbance [TMD] score calculated from the Profile of Mood States Inventory). The addition of dyadic adjustment in step 3 significantly improved prediction by 5.6%; and the new model accounted for 10.4% of the variance of TMD. Thus, dyadic adjustment contributed significantly to prediction when variables in the urinary and sexual function domains were controlled. My study, along with Wooten et al.'s findings

supports the importance of the dyadic relationship's influence on psychological well-being in men with PC.

Prior research has also shown that men with PC who are married and report higher marital quality are better adjusted with lower levels of distress compared to those who are married and report lower marital quality. Rodrigue and Park (1996) examined the relationship between the psychological adjustment of adults with cancer and two marital variables: married versus unmarried and high versus low marital quality. Participants with high marital quality had lower depression and anxiety than did their less happily married peers. Males with high marital quality reported fewer anxiety symptoms compared to all other married subjects. A greater percentage of unmarried subjects and subjects with low marital quality reported clinically elevated levels of symptomatology compared to those with high marital quality. This study provided empirical support for the influence of social support within the context of marriage. The findings of Rodrigue and Park are consistent with the results from my study-namely, the importance of the dyadic relationship on psychological well-being in men with PC.

Banthania et al. (2003) examined the relationship between coping and distress in couples faced with PC, and considered dyadic functioning as a third variable that potentially moderated or mediated the relationship. Both moderation and mediation models were tested using couples' composite dyadic adjustment scores. Only the moderation model was supported. Banthia et al., (2003) reported that the relationship between coping and distress depends on the quality of dyadic functioning for PC survivors and that being part of a strong dyad may serve as a buffering factor. My study differs from Banthania et al.'s in that we measured psychological well-being as the

outcome, while Banthania et al. measured distress or lack of well-being. However, the strength or quality of the dyadic relationship proved important in both research studies, thus once again confirming the importance of the dyadic relationship in predicting psychological well-being.

The majority (83%) of the sample in my study had DAS scores that indicated a non-distressed marital relationship. Similarly, the majority of men scored high in self-reported levels of social support. Social support and marital adjustment were weakly correlated in my study. This finding deserves thoughtful consideration regarding the meaning of support in conjunction with marital adjustment. Revenson (1994) notes that members of elderly couples that are post-retirement are likely to spend most of their time with their partners, perhaps implying that men with higher scores on the social support scale get most of their support from their spouses.

Secondary Findings

In this study, emotional expressiveness had a positive influence on psychological well-being before adding dyadic adjustment. This finding is consistent with findings from multiple researchers, who reported that men with PC who are able to express their emotions have better mental health than their peers who restrict the expression of their emotions (Addis & Mahalik, 2003; Burns & Mahalik, 2007; Helgeson & Lopore, 1997; Roesch et al., 2005).

This sample of men had a mean score of 39 on the EOM scale, which indicates high levels of expressiveness. The high level of expressiveness among men in this study is likely due to the fact that they were primarily recruited through support groups for men with PC. In the support groups that I attended, these men were exceptionally open to

discussing their emotional concerns. It is possible that men in these groups are better able to express their feelings to other members of their support group, as well as to their spouses. This ability to express emotion may improve marital adjustment, which then in turn positively influences their psychological well-being.

Prior researchers have suggested that supportive relationships may improve mental functioning by helping men cognitively process their experiences with PC, thereby enhancing psychological well-being (Roberts et al., 2006). However, men who are tied to the gender script of emotional restrictiveness are noted to prefer and seek primarily informational support and associated assistance, often neglecting to seek emotional support.

While most, if not all studies confirm the importance of support, this study attempts to explore the possibility that not all men are inclined to express their need for emotional support, underscoring the need for nurses to be aware of men who are potentially at risk. This aspect of emotional expressiveness points to the importance of further research to gain a better understanding of how to assist this potentially vulnerable group.

Overall, my findings on the importance of marital adjustment as a predictor of psychological well-being emphasizes the need for more research in a more diverse population of men diagnosed with PC. One limitation of the prior body of research on PC is that researchers primarily focused on functional variables rather than psychosocial variables. Moreover, the researchers who reported findings on social support and marital adjustment defined those constructs loosely, making their results difficult to interpret. For example, researchers used terms such as social support without defining what type of

social support they have measured. Research into marriage variables have used terms such as marital satisfaction, marital quality, marital relationship, and marital adjustment interchangeably, while reporting the use of instruments that purport to measure marital satisfaction or marital adjustment.

This study defined social support as the perceived social support, the marital relationship or quality as marital adjustment, and expression of emotion as emotional expressiveness. The study maintained consistency throughout, connecting the constructs with the measurements. There may well be better approaches to tease out the meanings of these constructs, including the use of qualitative methods, in future research studies given the paucity of studies exploring this topic.

Impact of Dissertation on the State of the Science

There is little research exploring the psychological well-being of men with PC. Although researchers and clinicians have established that PC survivors are growing in number and are living longer, there are no guidelines for assessing and treating men who might be at risk for decreased psychological well-being.

In this dissertation, I have advanced the state of the science by demonstrating that marital adjustment is an important contributor to the psychological well-being of men with PC, thereby pinpointing one factor that could be targeted for assessment to identify men who might be at risk for poor psychological well-being.

Clinical Implications

Nurses are in a pivotal position to support men as they are diagnosed and treated for PC. When asked to explain why they chose the number that best described their social support, participants in this study mainly described the support they received from their

partner. They also described excellent and professional support received by their doctors, nurses and supporting staff in the comment section. These findings are consistent with other researchers (Fitch, et al, 2000; Keitel, et. al, 1990) who have shown that support is a relevant factor that influences how men with PC and their spouses deal with the illness in terms of facilitating successful adjustment.

Other research findings underscore the central role of the nurse in providing men with time and privacy to express their concerns at the time of diagnosis. Some men have difficulty expressing their need for emotional support (Leiber, et al., 1976). As few as only ten percent of PC participants living with partners were found to confide in their partners about emotional difficulties (Helgason et al., 1997).

The consensus of these researchers points to the need for greater understanding of the needs of men with PC in adjusting to this diagnosis. While it seems clear that the dyadic relationship is an important factor in predicting psychological well-being, it is also reported that some men do not chose to tell their partner about their fears related to a diagnosis of PC and might be more willing to discuss their concerns with their nurse. The nurse might assess how the partners are doing together, rather than focusing on just the patient and also be alert to the possibility that some men might prefer to seek support from their nurse.

Practical clinical applications include nursing interventions that will: (a) assess men's current levels of support, particularly the strength and quality of the dyadic relationship; (b) promote support during an office visit by providing information to both the patient and their partner, and (c) inform men on how to find local support groups. For the men not inclined to attend support groups, the nurse might consider providing more

time for discussion and expression of concerns at office visits, depending on the individual man's preference. Helgeson and Cohen (1996) note that "informational support" provides facts used to guide and advise patients, thereby helping to ameliorate the sense of confusion that arises with the diagnosis of PC. This type of support may help men understand the cause, course and treatment of the illness.

Future Research Implications

The most important recommendation for future research would be for researchers to conduct dyadic research looking at both members of the dyad and assessing the needs of both the patient and the partner as PC is often referred to as a "couple disease" (Baider et al., 1998; Badr & Taylor, 2008; Banthia et al., 2003). During my data collection, the men frequently stated that they wished their partner could have been involved in the study. Therefore, my future research in this area will include both members of the dyad in data collection. Additionally, it would be informative to study men and their partner at longitudinal intervals of time, for example, at six months and yearly after treatment to determine differences in psychological well-being and marital adjustment over time.

There is a need to design a method to identify and assess men at risk in order to provide support to men who may need it. Early identification of men at risk would allow the healthcare team to provide information and referral to further sources of social support. At the very least, healthcare workers might target men without support and allow extra time during appointments for questions and general discussion of concerns.

One of the inclusion criteria in this study was that participants had to be married or partnered, so it was not possible to compare married to unmarried/un-partnered men. The study only measured the "quality or adjustment" of the marital relationship as it

related to psychological well-being, rather than analyzing differences between men who had the support of a partnered relationship and those who did not. Future studies could include married/partnered married, and men who are not married/partnered in order to compare the two groups

Furthermore, the study design excluded widowed men who had been married at the time of diagnosis and treatment. During my data collection, these men complained that they felt excluded from the current study. They suggested to me that they be included in future studies, as they can answer the questions by remembering their relationships. Some men said they had been married as long as 40-50 years and were only recently widowed but were still excluded from the study. Future research designs could include widowed men as participants.

Men in PC support groups appear interested and open to discussing topics for future research studies. Including PC survivors and their partner in a qualitative study to explore the meaning of this experience would provide additional important information for healthcare providers to better understand the meaning of the impact of this condition.

During the course of carrying out this study, I realized the limitations of using the SPWB instrument to assess psychological well-being and the VAS for assessing social support. Men complained frequently that the SPWB instrument was long, unwieldy, and difficult for them to understand; this difficulty in completing the tool was demonstrated by the large number of missing data. Furthermore, the VAS did not demonstrate variability, and due to its one item character, it did not fully capture other aspects of social support.

In future research studies, I plan to use the Functional Assessment of Cancer Therapy-Prostate, Version 4 (FACT-P) to assess well-being, social support and marital adjustment in men with PC instead of the SPWB and DAS measures used in this dissertation. The FACT-P is designed to assess actual functioning as well as the extent to which these different dimensions affect overall quality of life. In prior research, the FACT-P (See Appendix J) shows acceptable to very good psychometric characteristics. The FACT-P and its subscales demonstrate acceptable to high internal consistency ($\alpha = 0.87-0.89$), are sensitive to clinical changes over time, and are able to discriminate between patients at different stages of disease. The core measure's convergent validity is supported by moderately high to high correlations with measures of quality of life, distress mood, and activity level (Esper, Hampton, Smith, & Pienta, 1999; Esper, et al., 1997). The format of the FACT-P scales is well organized and easy to understand. The questions about social/family well-being seem to ask for a deeper level of emotional expression and appear to at least refer to some of the concepts I believe are important to men diagnosed with PC, including relations with others, purpose or meaning of life, and personal growth. The FACT-P is self-administered and requires 8-10 minutes to complete and appears to address the major concepts that I was interested in measuring using a language that is succinct, clear and easy to understand. This basic language may be an advantage over using the DAS and SPWB which some men appeared to have difficulty understanding.

This study also underlines one of the more important conclusions of the research conducted by Balderson and Towell (2003); namely that health professionals should be aware of the potential for psychological distress in men with apparent deficits in social or

family support. An area for future research includes assessment and identification of men who might benefit from focused attention from the healthcare team with subsequent interventions to support those men who are at risk.

Limitations and Strengths

The study was limited by the small convenience sample of men with PC, most of whom were relatively well-educated, affluent, elderly Caucasian males who belonged to support groups. Men who attend support groups are a self-selected group of men inclined toward open expression and do not necessarily represent the general population of men. One would expect these men to score high on the instruments that were administered in terms of expressiveness and social support. However, my self-selected sample could also be considered a strength of the study, because these men were willing to participate and recruit other support group members to participate, thus resulting in a sample size that enabled analyses of the data. These men were also expressive and engaged throughout the research process, and were open to providing me with suggestions for future research.

Missing data on the DAS was an additional limitation in the study. A number of men had difficulty completing a section of the survey. The DAS appeared first in the survey after the demographic section. The participants went on to complete the other surveys, which implies that they were not “tired” or struggling to complete the questionnaire. Speculation as to reasons for incompleteness of that section include: (a) questions or answers being unclear, and/or (b) men not wanting to answer questions related to intimacy (affection or sexuality). This may possibly be related to the side effects of PC treatment which can leave men with sexual dysfunction and/or incontinence.

While the VAS of perceived social support is problematic in terms of providing comprehensive information (as it precludes an in-depth analysis), it provided an overview of the important concept in the design of the study. Some limitations of VAS methodology to measure social support include: (a) internal consistency cannot be assessed, and (b) type and extent of support cannot be examined. The decision to use the VAS was based on time and ease of use, and a clear history of its validity of use for linear measurement.

Despite the limitations of the study, there is strong evidence that marital adjustment does have a positive influence on the psychological well-being of men with PC, and this relationship deserves more attention and further study. In the broader scope, more information is needed to understand why marital adjustment accounted for the largest amount of variance in psychological well-being so that healthcare providers can address issues of concern with those who may be more at risk.

Chapter 6: Summary

Background and Purpose

The overall purpose of this dissertation was to explore factors that affect the psychological well-being of men diagnosed with PC. Based on a review of the research literature, a study was designed and conducted to investigate three specific factors cited as important influences. This study was conducted to examine whether social support, expression of emotion, and marital adjustment were independent predictors of psychological well-being in men with PC.

Men diagnosed with PC are at particular risk for experiencing diminished psychological well-being. To date, however, little is known about the factors that influence this well-being, and even less is known about how these men might be assessed to determine who is at risk. An improved understanding of factors that influence the psychological well-being of patients with PC may encourage health care providers to be more aware of the psychological care needs of this increasingly growing number of men and therefore of the need to assess and identify those specific men who are more at risk than others.

In light of the findings of this study, men who lack support and who are not married, or who are not in supportive dyadic relationships, are likely at risk for decreased psychological well-being. These men might benefit if they are identified early after being diagnosed with PC. Early assessment and identification would be aimed at providing information on local and national support groups such as Us TOO. These support groups provide current information on issues concerning PC survivorship in various ways that might appeal to a wide range of diverse men.

Us TOO and other PC organizations have websites providing information that can be accessed anonymously, as well as Facebook groups, private forums, and blogs that provide for men's needs for privacy with sensitive issues. In addition, Us TOO support groups meet monthly and provide support in the way of information, mentorship, and general social support. These groups provide a space where men and their partners can express themselves, discuss their concerns, and have their questions answered regarding treatment, side effects, and recovery issues.

With increased longevity of survivorship, long term adjustment is more important than ever. Marital adjustment is an important predictor of the psychological well-being of men with PC. By improving our understanding of how marital adjustment and other modifiable predictors influence psychological well-being, we can better develop interventions to help men cope with the psychological challenges of PC survivorship. The goal of my future program of research will be to determine ways that nurses can intervene to help men with PC grow and thrive in the wake of their diagnosis by designing and implementing a study to assess the needs of both the patients and the partner.

Appendix A: Demographic Questionnaire

Please provide some background information that best describes you.

Date:

How old are you?

_____ years old

What is your current relationship status? (Select all that apply):

- 1) Married
- 2) Unmarried cohabitating couple
- 3) Divorced
- 4) Widowed
- 5) Other: _____

What is your ethnicity?

- 1) Caucasian (White)
- 2) African-American
- 3) Hispanic/Latino
- 4) Asian
- 5) Native Hawaiian or other Pacific Islander
- 6) American Indian/Alaskan Native
- 7) Other _____

What is the highest level of education you have completed?

- 1) < High school graduate
- 2) High school graduate/GED
- 3) Some College
- 4) Associate's Degree
- 5) Bachelor's Degree
- 6) Master's Degree
- 7) Doctoral Degree
- 8) Doctoral Studies
- 9) Not recorded

Where do you live?

- 1) U.S.
- 2) Canada
- 3) United Kingdom
- 4) Australia
- 5) Other (please specify) _____

Where did you learn about this survey?

Please give us the name of the Facebook page or website that shared our link.

What is your employment status? (Select all that apply):

- 1) Full-time
- 2) Part-time
- 3) Homemaker
- 4) Student
- 5) Unemployed
- 6) Retired
- 7) Disabled
- 8) Other (Please specify) _____

What is your household income?

- 1) Less than \$20,000
- 2) \$20,001 - \$40,000
- 3) \$40,001 - \$60,000
- 4) \$60,001 - \$80,000
- 5) More than \$80,001

Who do you live with? (Select all that apply)

- 1) With partner or spouse
- 2) With family Please describe: _____
- 3) Other Please describe: _____

What is your religious affiliation?

- 1) None
- 2) Catholic
- 3) Protestant
- 4) Jewish
- 5) Muslim
- 6) Other: (Please specify) _____

Do you have a family history of prostate cancer?

- 1) Yes
- 2) No
- 3) Don't know

Relationship of family member to you: _____

How long has it been since you were first diagnosed with prostate cancer?

- 1) < 1 month
- 2) 1-6 months
- 3) 7-12 months
- 4) > 12 months

What was your stage of cancer when you were first diagnosed?

- 1) Stage 1- Tumor is small and limited to the organ or origin. No lymph nodes are involved
- 2) Stage 2- Tumor is greater than 3 cm and has invaded local lymph nodes
- 3) Stage 3- Tumor is spread to nearby structures/organs or the regional lymph nodes
- 4) Stage 4- Cancer has spread to distant organs (metastasis)

What is your stage of cancer right now?

- 1) Stage 1- Tumor is small and limited to the organ or origin. No lymph nodes are involved
- 2) Stage 2- Tumor is greater than 3 cm and has invaded local lymph nodes
- 3) Stage 3- Tumor is spread to nearby structures/organs or the regional lymph nodes
- 4) Stage 4- Cancer has spread to distant organs (metastasis)
- 5) In remission
- 6) In partial remission
- 7) Other (specify) _____

If you know your Gleason score, please enter it here. If not, that's okay. _____

If you know your PSA level, please enter it here. If not, that's okay. _____

What type of treatment have you had? (Select all that apply):

- 1) "Watchful Waiting"
- 2) Chemotherapy
- 3) Radiation
- 4) Hormone Therapy
- 5) Surgery
- 6) Undecided

Do you have any other serious health conditions? (Select all that apply):

- 1) Hypertension
- 2) Diabetes
- 3) Chronic Obstructive Pulmonary Disease (COPD)
- 4) Other (Please specify) _____

Have you been diagnosed with depression within the last 10 years?

- 1) Yes
- 2) No

If yes, did you ever receive treatment for depression?

- 1) Counseling
- 2) Medication
- 3) Both counseling and medication
- 4) No treatment

Are you taking any medication for depression? If so, please specify the name and dose.

Appendix B: The Visual Analog Scale of Perceived Social Support

The Visual Analog Scale of Social Support

Select the number that best describes your social support (family, friends, health care personnel)



What is the meaning of the number you marked?

Appendix C: Dyadic Adjustment Scale

DYADIC ADJUSTMENT SCALE

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occa- sionally Disagree	Fre- quently Disagree	Almost Always Disagree	Always Disagree
1. Handling family finances	0	0	0	0	0	0
2. Matters of recreation	0	0	0	0	0	0
3. Religious matters	0	0	0	0	0	0
4. Demonstrations of affection	0	0	0	0	0	0
5. Friends	0	0	0	0	0	0
6. Sex relations	0	0	0	0	0	0
7. Conventionality (correct or proper behavior)	0	0	0	0	0	0
8. Philosophy of life	0	0	0	0	0	0
9. Ways of dealing with parents or in-laws	0	0	0	0	0	0
10. Aims, goals, and things believed important	0	0	0	0	0	0
11. Amount of time spent together	0	0	0	0	0	0
12. Making major decisions	0	0	0	0	0	0
13. Household tasks	0	0	0	0	0	0
14. Leisure time interests and activities	0	0	0	0	0	0
15. Career decisions	0	0	0	0	0	0

	All the time	Most of the time	More often than not	Occa- sionally	Rarely	Never
16. How often do you discuss or have you considered divorce, separation, or terminating your relationship?	0	0	0	0	0	0
17. How often do you or your mate leave the house after a fight?	0	0	0	0	0	0
18. In general, how often do you think that things between you and your partner are going well?	0	0	0	0	0	0
19. Do you confide in your mate?	0	0	0	0	0	0
20. Do you ever regret that you married? (or lived together)	0	0	0	0	0	0
21. How often do you and your partner quarrel?	0	0	0	0	0	0
22. How often do you and your mate "get on each other's nerves?"	0	0	0	0	0	0

	Every Day	Almost Every Day	Occasionally	Rarely	Never
23. Do you kiss your mate?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	All of them	Most of them	Some of them	Very few of them	None of them
24. Do you and your mate engage in outside interests together?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How often would you say the following events occur between you and your mate?

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
25. Have a stimulating exchange of ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Laugh together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Calmly discuss something	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Work together on a project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

These are some things about which couples sometimes agree and sometime disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Check yes or no)

	Yes	No
29. <input type="radio"/> <input type="radio"/> Being too tired for sex.	<input type="radio"/>	<input type="radio"/>
30. <input type="radio"/> <input type="radio"/> Not showing love.	<input type="radio"/>	<input type="radio"/>

31. The circles on the following line represent different degrees of happiness in your relationship. The middle point, "happy," represents the degree of happiness of most relationships. Please fill in the circle which best describes the degree of happiness, all things considered, of your relationship.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extremely Unhappy	Fairly Unhappy	A Little Unhappy	Happy	Very Happy	Extremely Happy	Perfect

32. Which of the following statements best describes how you feel about the future of your relationship?
- I want desperately for my relationship to succeed, and *would go to almost any length* to see that it does.
 - I want very much for my relationship to succeed, and *will do all I can* to see that it does.
 - I want very much for my relationship to succeed, and *will do my fair share* to see that it does.
 - It would be nice if my relationship succeeded, but *I can't do much more than I am doing now* to help it succeed.
 - It would be nice if it succeeded, but I *refuse to do any more than I am doing now* to keep the relationship going.
 - My relationship can never succeed, and *there is no more that I can do* to keep the relationship going.

Appendix D: Expression of Emotion Scale

INSTRUCTIONS: PLEASE RESPOND TO THE ITEMS BY CIRCLING THE NUMBER THAT BEST DESCRIBES HOW OFTEN THE FOLLOWING OCCUR:

1 = NEVER

2 = SELDOM

3 = OFTEN

4 = VERY OFTEN

- | | | | | |
|--|---|---|---|---|
| 1. When I do feel angry toward people I tell them. | 1 | 2 | 3 | 4 |
| 2. When I do feel love toward people I tell them. | 1 | 2 | 3 | 4 |
| 3. When I do feel sorrow I tell people. | 1 | 2 | 3 | 4 |
| 4. When I do feel happy I tell people. | 1 | 2 | 3 | 4 |
| 5. When I do feel tenderness toward people I tell them. | 1 | 2 | 3 | 4 |
| 6. When I do feel grief I tell people. | 1 | 2 | 3 | 4 |
| 7. When I do feel delight I tell people. | 1 | 2 | 3 | 4 |
| 8. When I do feel hate toward people I tell them. | 1 | 2 | 3 | 4 |
| 9. When I do feel affection toward people I tell them. | 1 | 2 | 3 | 4 |
| 10. When I do feel resentment toward people I tell them. | 1 | 2 | 3 | 4 |
| 11. When I do feel sad I tell people. | 1 | 2 | 3 | 4 |
| 12. When I do feel joy I tell people. | 1 | 2 | 3 | 4 |
| 13. When I do feel rage I tell people. | 1 | 2 | 3 | 4 |
| 14. When I do feel warmth I tell people. | 1 | 2 | 3 | 4 |
| 15. When I do feel blue I tell people. | 1 | 2 | 3 | 4 |
| 16. When I do feel elation I tell people. | 1 | 2 | 3 | 4 |

Appendix E: Scales of Psychological Well-Being SPWB

The following set of questions deals with how you feel about yourself and your life. Please circle your response and remember that there are no right or wrong answers.

Circle the number that best describes your present agreement or disagreement with each statement.	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
1. In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
2. When I look at the story of my life, I am pleased with how things have turned out.	1	2	3	4	5	6
3. Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6
4. The demands of everyday life often get me down.	1	2	3	4	5	6
5. I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
6. I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6
7. I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
8. I like most aspects of my personality.	1	2	3	4	5	6
9. I tend to be influenced by people with strong opinions.	1	2	3	4	5	6
10. In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6
11. People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6
12. I have confidence in my opinions, even if they are contrary to the general consensus.	1	2	3	4	5	6
13. I have not experienced many warm and trusting relationships with others.	1	2	3	4	5	6
Circle the number that best describes your present agreement or disagreement with each statement.	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree

14. Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5	6
15. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6
16. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
17. I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5	6
18. I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6

Appendix F: Patient Health Questionnaire-2

Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

0 = Not difficult at all

1 = Somewhat difficult

2 = Very difficult

3 = Extremely difficult

Appendix G: Participant Questionnaire Packet

Demographic Questionnaire

Please provide some background information that best describes you.

Date:

How old are you?

_____ years old

What is your current relationship status? (Select all that apply):

- 6) Married
- 7) Unmarried cohabiting couple
- 8) Divorced
- 9) Widowed
- 10) Other: _____

What is your ethnicity?

- 8) Caucasian (White)
- 9) African-American
- 10) Hispanic/Latino
- 11) Asian
- 12) Native Hawaiian or other Pacific Islander
- 13) American Indian/Alaskan Native
- 14) Other _____

What is the highest level of education you have completed?

- 10) < High school graduate
- 11) High school graduate/GED
- 12) Some College
- 13) Associate's Degree
- 14) Bachelor's Degree
- 15) Master's Degree
- 16) Doctoral Degree
- 17) Doctoral Studies
- 18) Not recorded

Where do you live?

- 6) U.S.
- 7) Canada
- 8) United Kingdom
- 9) Australia
- 10) Other (please specify) _____

Where did you learn about this survey?

Please give us the name of the Facebook page or website that shared our link.

What is your employment status? (Select all that apply):

- 9) Full-time
- 10) Part-time
- 11) Homemaker
- 12) Student
- 13) Unemployed
- 14) Retired
- 15) Disabled
- 16) Other (Please specify) _____

What is your household income?

- 6) Less than \$20,000
- 7) \$20,001 - \$40,000
- 8) \$40,001 - \$60,000
- 9) \$60,001 - \$80,000
- 10) More than \$80,001

Who do you live with? (Select all that apply)

- 4) With partner or spouse
- 5) With family Please describe: _____
- 6) Other Please describe: _____

What is your religious affiliation?

- 7) None
- 8) Catholic
- 9) Protestant
- 10) Jewish
- 11) Muslim
- 12) Other: (Please specify) _____

Do you have a family history of prostate cancer?

- 4) Yes
- 5) No
- 6) Don't know

Relationship of family member to you: _____

How long has it been since you were first diagnosed with prostate cancer?

- 5) < 1 month
- 6) 1-6 months
- 7) 7-12 months
- 8) > 12 months

What was your stage of cancer when you were first diagnosed?

- 5) Stage 1- Tumor is small and limited to the organ or origin. No lymph nodes are involved
- 6) Stage 2- Tumor is greater than 3 cm and has invaded local lymph nodes
- 7) Stage 3-Tumor is spread to nearby structures/organs or the regional lymph nodes
- 8) Stage 4-Cancer has spread to distant organs (metastasis)

What is your stage of cancer right now?

- 8) Stage 1- Tumor is small and limited to the organ or origin. No lymph nodes are involved
- 9) Stage 2- Tumor is greater than 3 cm and has invaded local lymph nodes
- 10) Stage 3-Tumor is spread to nearby structures/organs or the regional lymph nodes
- 11) Stage 4-Cancer has spread to distant organs (metastasis)
- 12) In remission
- 13) In partial remission
- 14) Other (specify) _____

If you know your Gleason score, please enter it here. If not, that's okay. _____

If you know your PSA level, please enter it here. If not, that's okay. _____

What type of treatment have you had? (Select all that apply):

- 7) "Watchful Waiting"
- 8) Chemotherapy
- 9) Radiation
- 10) Hormone Therapy
- 11) Surgery
- 12) Undecided

Do you have any other serious health conditions? (Select all that apply):

- 5) Hypertension
- 6) Diabetes
- 7) Chronic Obstructive Pulmonary Disease (COPD)
- 8) Other (Please specify) _____

Have you been diagnosed with depression within the last 10 years?

- 3) Yes
- 4) No

If yes, did you ever receive treatment for depression?

- 5) Counseling
- 6) Medication
- 7) Both counseling and medication
- 8) No treatment

Are you taking any medication for depression? If so, please specify the name and dose.

The Visual Analog Scale of Social Support

Select the number that best describes your social support (family, friends, healthcare personnel)



What is the meaning of the number you marked?

DYADIC ADJUSTMENT SCALE

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occasionally Disagree	Frequently Disagree	Almost Always Disagree	Always Disagree
1. Handling family finances	0	0	0	0	0	0
2. Matters of recreation	0	0	0	0	0	0
3. Religious matters	0	0	0	0	0	0
4. Demonstrations of affection	0	0	0	0	0	0
5. Friends	0	0	0	0	0	0
6. Sex relations	0	0	0	0	0	0
7. Conventionality (correct or proper behavior)	0	0	0	0	0	0
8. Philosophy of life	0	0	0	0	0	0
9. Ways of dealing with parents or in-laws	0	0	0	0	0	0
10. Aims, goals, and things believed important	0	0	0	0	0	0
11. Amount of time spent together	0	0	0	0	0	0
12. Making major decisions	0	0	0	0	0	0
13. Household tasks	0	0	0	0	0	0
14. Leisure time interests and activities	0	0	0	0	0	0
15. Career decisions	0	0	0	0	0	0

	All the time	Most of the time	More often than not	Occasionally	Rarely	Never
16. How often do you discuss or have you considered divorce, separation, or terminating your relationship?	0	0	0	0	0	0
17. How often do you or your mate leave the house after a fight?	0	0	0	0	0	0
18. In general, how often do you think that things between you and your partner are going well?	0	0	0	0	0	0
19. Do you confide in your mate?	0	0	0	0	0	0
20. Do you ever regret that you married? (or lived together)	0	0	0	0	0	0
21. How often do you and your partner quarrel?	0	0	0	0	0	0
22. How often do you and your mate "get on each other's nerves?"	0	0	0	0	0	0

	Every Day	Almost Every Day	Occasionally	Rarely	Never
23. Do you kiss your mate?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	All of them	Most of them	Some of them	Very few of them	None of them
24. Do you and your mate engage in outside interests together?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How often would you say the following events occur between you and your mate?

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
25. Have a stimulating exchange of ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. Laugh together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Calmly discuss something	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Work together on a project	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

These are some things about which couples sometimes agree and sometime disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Check yes or no)

	Yes	No
29. <input type="radio"/> <input type="radio"/> Being too tired for sex.	<input type="radio"/>	<input type="radio"/>
30. <input type="radio"/> <input type="radio"/> Not showing love.	<input type="radio"/>	<input type="radio"/>

31. The circles on the following line represent different degrees of happiness in your relationship. The middle point, "happy," represents the degree of happiness of most relationships. Please fill in the circle which best describes the degree of happiness, all things considered, of your relationship.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extremely Unhappy	Fairly Unhappy	A Little Unhappy	Happy	Very Happy	Extremely Happy	Perfect

32. Which of the following statements best describes how you feel about the future of your relationship?
- I want desperately for my relationship to succeed, and *would go to almost any length* to see that it does.
 - I want very much for my relationship to succeed, and *will do all I can* to see that it does.
 - I want very much for my relationship to succeed, and *will do my fair share* to see that it does.
 - It would be nice if my relationship succeeded, but *I can't do much more than I am doing now* to help it succeed.
 - It would be nice if it succeeded, but I *refuse to do any more than I am doing now* to keep the relationship going.
 - My relationship can never succeed, and *there is no more that I can do* to keep the relationship going.

Expression of Emotion Scale

INSTRUCTIONS: PLEASE RESPOND TO THE ITEMS BY CIRCLING THE NUMBER THAT BEST DESCRIBES HOW OFTEN THE FOLLOWING OCCUR:

1 = NEVER

2 = SELDOM

3 = OFTEN

4 = VERY OFTEN

- | | | | | |
|--|---|---|---|---|
| 1. When I do feel angry toward people I tell them. | 1 | 2 | 3 | 4 |
| 2. When I do feel love toward people I tell them. | 1 | 2 | 3 | 4 |
| 3. When I do feel sorrow I tell people. | 1 | 2 | 3 | 4 |
| 4. When I do feel happy I tell people. | 1 | 2 | 3 | 4 |
| 5. When I do feel tenderness toward people I tell them. | 1 | 2 | 3 | 4 |
| 6. When I do feel grief I tell people. | 1 | 2 | 3 | 4 |
| 7. When I do feel delight I tell people. | 1 | 2 | 3 | 4 |
| 8. When I do feel hate toward people I tell them. | 1 | 2 | 3 | 4 |
| 9. When I do feel affection toward people I tell them. | 1 | 2 | 3 | 4 |
| 10. When I do feel resentment toward people I tell them. | 1 | 2 | 3 | 4 |
| 11. When I do feel sad I tell people. | 1 | 2 | 3 | 4 |
| 12. When I do feel joy I tell people. | 1 | 2 | 3 | 4 |
| 13. When I do feel rage I tell people. | 1 | 2 | 3 | 4 |
| 14. When I do feel warmth I tell people. | 1 | 2 | 3 | 4 |
| 15. When I do feel blue I tell people. | 1 | 2 | 3 | 4 |
| 16. When I do feel elation I tell people. | 1 | 2 | 3 | 4 |

Scales of Psychological Well-Being SPWB

The following set of questions deals with how you feel about yourself and your life. Please circle your response and remember that there are no right or wrong answers.

Circle the number that best describes your present agreement or disagreement with each statement.	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
1. In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5	6
2. When I look at the story of my life, I am pleased with how things have turned out.	1	2	3	4	5	6
3. Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5	6
4. The demands of everyday life often get me down.	1	2	3	4	5	6
5. I live life one day at a time and don't really think about the future.	1	2	3	4	5	6
6. I am quite good at managing the many responsibilities of my daily life.	1	2	3	4	5	6
7. I think it is important to have new experiences that challenge how you think about yourself and the world.	1	2	3	4	5	6
8. I like most aspects of my personality.	1	2	3	4	5	6
9. I tend to be influenced by people with strong opinions.	1	2	3	4	5	6
10. In many ways, I feel disappointed about my achievements in life.	1	2	3	4	5	6
11. People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5	6
12. I have confidence in my opinions, even if they are contrary to the general consensus.	1	2	3	4	5	6
13. I have not experienced many warm and trusting relationships with others.	1	2	3	4	5	6

Circle the number that best describes your present agreement or disagreement with each statement.	Strongly Disagree	Disagree Somewhat	Disagree Slightly	Agree Slightly	Agree Somewhat	Strongly Agree
14. Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5	6
15. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5	6
16. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5	6
17. I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5	6
18. I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5	6

Patient Health Questionnaire-2

Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

0 = Not difficult at all

1 = Somewhat difficult

2 = Very difficult

3 = Extremely difficult

Appendix H: Consent Form

The purpose of this survey is to gain a better understanding of how social support, the marital/partner relationship, and expression of emotions affect psychological well-being in men with prostate cancer.

Although you will not get personal benefit from taking part in this research study, your responses may help us understand more about the psychological well-being of men diagnosed with prostate cancer. We will be collecting responses from June 1, 2014 –December 31, 2014.

We hope to receive completed questionnaires from about 1,000 people, so your answers are important to us. Of course, you have a choice about whether or not to complete the surveys/questionnaires, but if you do participate, you are free to skip any questions or discontinue at any time.

The survey/questionnaires will take about 30 minutes to complete.

There are no known risks to participating in this study.

You will give us this information confidentially. We will not collect your name or any identifying information. The research team will not know that any information you provided came from you, nor even whether you participated in the study.

We are using REDCap to administer the survey. REDCap stores your response on a secure server. Please be aware, while we make every effort to safeguard your data once received from the online survey company, given the nature of online surveys, as with anything involving the Internet, we can never guarantee the confidentiality of the data while still on the survey company's servers, or while en route to either them or us.

If you have questions about the study, please feel free to ask; my contact information is given below. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

Thank you in advance for your assistance with this important project.

Sincerely,

Lee Anne Walmsley RN, MSN, PhD (c)

College of Nursing, University of Kentucky

PHONE: 859-323-8565

E-MAIL: lawalm0@uky.edu

PLEASE CHECK HERE TO INDICATE YOUR WILLINGNESS TO PARTICIPATE:

PLEASE TEAR OFF THIS TOP PAGE AND KEEP FOR YOUR RECORDS AND
REFERENCE. THANK YOU!

Appendix I: Permission to Post on Website

To whom it may concern:

I am excited to announce that I am conducting my first research study on the psychological well-being of men diagnosed with prostate cancer. The purpose of the study is to examine how social support, marital adjustment and emotional expressiveness influence psychological well-being in this population. Very little research has been conducted on this topic. The research study consists of 3 brief surveys that can be filled out online (taking about 30-45 minutes). Married and/or partnered men 18 years or older can fill out the survey. Please consider posting an invitation to participate in this important research study on your website so we can learn more about men with prostate cancer.

Would you allow us permission to post the following announcement on your website?

Sincerely,

Lee Anne Walmsley, RN, MSN, EdS, PhD (candidate)

Announcement: My First Research Study on the Psychological Well-Being of Men Diagnosed with Prostate Cancer!

I am excited to announce that I am conducting my first research study on the psychological well-being (the ability to face and deal with life's challenges) of men diagnosed with prostate cancer. Very little research has been done on this topic before, so not much is known about this topic.

My research question is: What impacts the psychological well-being among men diagnosed with prostate cancer?

The research study consists of 3 brief surveys that can be filled out online. Please fill out the survey if you:

- 1.) are 18 years or older
- 2.) are married or have a partner
- 3.) have not been diagnosed with cancer before

Please consider taking the survey and sharing the link with your friends! By participating in this research study, you will help us learn more about the psychological well-being of men with prostate cancer.

You can access the survey here ([link to the survey](#)).

Thanks for consideration and support,

Lee Anne

Appendix J: Functional Assessment of Cancer Therapy-Prostate, Version 4 (FACT – P)

FACT-P (Version 4)

Below is a list of statements that other people with your illness have said are important. Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

<u>PHYSICAL WELL-BEING</u>		Not at all	A little bit	Some- what	Quite a bit	Very much
GP1	I have a lack of energy	0	1	2	3	4
GP2	I have nausea	0	1	2	3	4
GP3	Because of my physical condition, I have trouble meeting the needs of my family	0	1	2	3	4
GP4	I have pain	0	1	2	3	4
GP5	I am bothered by side effects of treatment	0	1	2	3	4
GP6	I feel ill	0	1	2	3	4
GP7	I am forced to spend time in bed	0	1	2	3	4
<u>SOCIAL/FAMILY WELL-BEING</u>		Not at all	A little bit	Some- what	Quite a bit	Very much
GS1	I feel close to my friends.....	0	1	2	3	4
GS2	I get emotional support from my family	0	1	2	3	4
GS3	I get support from my friends.....	0	1	2	3	4
GS4	My family has accepted my illness	0	1	2	3	4
GS5	I am satisfied with family communication about my illness.....	0	1	2	3	4
GS6	I feel close to my partner (or the person who is my main support)	0	1	2	3	4
Q1	<i>Regardless of your current level of sexual activity, please answer the following question. If you prefer not to answer it, please mark this box <input type="checkbox"/> and go to the next section.</i>					
GS7	I am satisfied with my sex life	0	1	2	3	4

FACT-P (Version 4)

Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

EMOTIONAL WELL-BEING

		Not at all	A little bit	Some- what	Quite a bit	Very much
GE1	I feel sad	0	1	2	3	4
GE2	I am satisfied with how I am coping with my illness.....	0	1	2	3	4
GE3	I am losing hope in the fight against my illness.....	0	1	2	3	4
GE4	I feel nervous	0	1	2	3	4
GE5	I worry about dying.....	0	1	2	3	4
GE6	I worry that my condition will get worse.....	0	1	2	3	4

FUNCTIONAL WELL-BEING

		Not at all	A little bit	Some- what	Quite a bit	Very much
GF1	I am able to work (include work at home)	0	1	2	3	4
GF2	My work (include work at home) is fulfilling.....	0	1	2	3	4
GF3	I am able to enjoy life.....	0	1	2	3	4
GF4	I have accepted my illness.....	0	1	2	3	4
GF5	I am sleeping well	0	1	2	3	4
GF6	I am enjoying the things I usually do for fun	0	1	2	3	4
GF7	I am content with the quality of my life right now.....	0	1	2	3	4

FACT-P (Version 4)

Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

<u>ADDITIONAL CONCERNS</u>		Not at all	A little bit	Some- what	Quite a bit	Very much
C2	I am losing weight.....	0	1	2	3	4
C6	I have a good appetite	0	1	2	3	4
P1	I have aches and pains that bother me.....	0	1	2	3	4
P2	I have certain parts of my body where I experience pain....	0	1	2	3	4
P3	My pain keeps me from doing things I want to do	0	1	2	3	4
P4	I am satisfied with my present comfort level	0	1	2	3	4
P5	I am able to feel like a man	0	1	2	3	4
P6	I have trouble moving my bowels	0	1	2	3	4
P7	I have difficulty urinating.....	0	1	2	3	4
BL2	I urinate more frequently than usual	0	1	2	3	4
P8	My problems with urinating limit my activities.....	0	1	2	3	4
BL5	I am able to have and maintain an erection.....	0	1	2	3	4

References

- Addis, M. E., & Mahalik, J. R. (2003). Men, masculinity, and the contexts of help seeking. *American Psychologist*, 58, 5-14. doi: 10.1037/0003-066X.58.1.5
- American Cancer Society. Cancer Facts & Figures. 2011. ACS; Atlanta, GA: 2015.
- Albertsen, P. C., Nease, R. F., Jr., & Potosky, A. L. (1998). Assessment of patient preferences among men with prostate cancer. *Journal of Urology*, 159, 158-163. doi: S0022-5347(01)64043-6
- Ames, S. C., Tan, W. W., Ames, G. E., Stone, R. L., Rizzo, T. D., Jr., Heckman, M. G., . . . Werch, C. E. (2008). Quality of life of men with biochemical recurrence of prostate cancer. *Journal of Psychosocial Oncology*, 26, 17-34.
- Arrington, M. I. (2003). "I don't want to be an artificial man": Narrative reconstruction of sexuality among prostate cancer survivors. *Sexuality & Culture: An Interdisciplinary Quarterly*, 7, 30-58.
- Arrington, M. I., Grant, C. H., & Vanderford, M. L. (2005). Man to man and side by side, they cope with prostate cancer: Self-help and social support. *Journal of Psychosocial Oncology*, 23, 81-102. McNicholas TA.
- Awsare N. S., Green J. S., Aldwinckle B., Hanbury D. C., Boustead G.B., & McNicholas, T. A. (2008). The measurement of psychological distress in men being investigated for the presence of prostate cancer. *Prostate Cancer & Prostatic Diseases*, 11, 384-389, 2008.
- Badr, H., & Taylor, C. L. (2008). Effects of relationship maintenance on psychological distress and dyadic adjustment among couples coping with lung cancer. *Health Psychology*, 27, 616-627. doi: 2008-13168-013
- Baider, L., Ever-Hadani, P., Goldzweig, G., Wygoda, M. R., & Peretz, T. (2003). Is perceived family support a relevant variable in psychological distress? A sample of prostate and breast cancer couples. *Journal of Psychosomatic Research*, 55, 453-460. doi: 35400011978161.0070
- Baider, L., Walach, N., Perry, S., & Kaplan De-Nour, A. (1998). Cancer in married couples: Higher or lower distress? *Journal of Psychosomatic Research*, 45, 239-248. doi: S0022399998000166
- Balderson, N., & Towell, T. (2003). The prevalence and predictors of psychological distress in men with prostate cancer who are seeking support. *British Journal of Health Psychology*, 8, 125-134. doi: 10.1348/135910703321649114
- Balwick, J. O. (1988). *The inexpressive male*. Lexington, MA: Lexington Books.
- Banthia, R., Malcarne, V. L., Varni, J. W., Ko, C. M., Sadler, G. R., & Greenbergs, H. L. (2003). The effects of dyadic strength and coping styles on psychological distress in couples faced with prostate cancer. *Journal of Behavioral Medicine*, 26, 31-52.
- Batel-Copel, L. M., Kornblith, A. B., Batel, P. C., & Holland, J. C. (1997). Do oncologists have an increasing interest in the quality of life of their patients? A literature review of the last 15 years. *European Journal of Cancer*, 33, 29-32.
- Bertero, C. (2000). Types and sources of social support for people afflicted with cancer. *Nursing and Health Sciences*, 2, 93-101.
- Bierman, A., Fazio, E. M., & Milkie, M. A. (2006). A multifaceted approach to the mental health advantage of the married-Assessing how explanations vary by outcome measure and unmarried group. *Journal of Family Issues*, 27, 554-582. doi: 10.1177/0192513X05284111

- Bjorck, J. P., Hopp, D. P., & Jones, L. W. (1999). Prostate cancer and emotional functioning: Effects of mental adjustment, optimism, and appraisal. *Journal of Psychosocial Oncology, 17*, 71-85. doi: 35400008944127.0050
- Boehmer, U., & Clark, J. A. (2001). Communication about prostate cancer between men and their wives. *Journal of Family Practice, 50*, 226-231.
- Bradbury, T. N., Fincham, F. D., & Beach, S. R. H. (2000). Research on the nature and determinants of marital satisfaction: A decade in review. *Journal of Marriage & the Family, 62*, 964-980. doi: 10.1111/j.1741-3737.2000.00964.x
- Burke, M. A., Lowrance, W., & Perczek, R. (2003). Emotional and cognitive burden of prostate cancer. *Urologic Clinics of North America, 30*, 295-304. doi:10.1016/S0094-0143(02)00190-8
- Burman, B., & Margolin, G. (1992). Analysis of the association between marital relationships and health problems: An interactional perspective. *Psychological Bulletin, 112*, 39-63. doi: 35400002930908.0030
- Burns, S. M., & Mahalik, J. R. (2007). Understanding how masculine gender scripts may contribute to men's adjustment following treatment for prostate cancer. *American Journal of Men's Health, 1*, 250-261. doi: 1557988306293380
- Cantril, H. A. (1963). A study of aspirations. *Scientific American, 8*, 41. doi: 10.1038/scientificamerican0263-41
- Carlsson, M., & Hamrin, E. (1994). Psychological and psychosocial aspects of breast cancer and breast cancer treatment. A literature review. *Cancer Nursing, 17*, 418-428. doi:10.1097/00002820-199410000-00007
- Cella, D. F., & Tulsky, D. S. (1993). Quality of life in cancer: Definition, purpose, and method of measurement. *Cancer Investigation, 11*, 327-336. doi:10.3109/07357909309024860
- Clarke, P. J., Marshall, V. W., Ryff, C. D., & Rosenthal, C. J. (2000). Well being in Canadian seniors: Findings from the Canadian study of health and aging. *Canadian Journal on Aging, 19*, 139-159. doi:10.1017/S0714980800013982
- Cobb, S. (1976). Presidential address-1976. Social support as a moderator of life stress. *Psychosomatic Medicine, 38*, 300-314.
- Cohen, J. (1983). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310-357. doi:10.1037/0033-2909.98.2.310
- Combs, R. H. (1991). Marital status and personal well-being: A literature review. *Family Relations: An Interdisciplinary Journal of Applied Family Studies, 40*, 97-102. doi:10.2307/585665
- Couper, J. W., Bloch, S., Love, A., Duchesne, G., Macvean, M., & Kissane, D. W. (2006). The psychosocial impact of prostate cancer on patients and their partners. *Medical Journal of Australia, 185*, 428-432. doi: cou10664_fm
- Crane, D.R., Middleton, K.C., & Bean, R.A. (2000). Establishing criterion scores for the Kansas Marital Satisfaction Scale and the Revised Dyadic Adjustmetn Scale, *The American Journal of Family Therapy, 28*, 53-60. doi: 10.1080/019261800261815
- Dakof, G. A., & Taylor, S. E. (1990). Victims' perceptions of social support: What is helpful from whom? *Journal of Personality and Social Psychology, 58*, 80-89. doi: 10.1037/0022-3514.58.1.80

- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*, 542-575. doi:10.1037/0033-2909.95.3.542
- Dunkel-Schetter, C. (1984). Social support and cancer: Findings based on patient interviews and their implications. *Journal of Social Issues*, *40*, 77-79. doi: 10.1111/j.1540-4560.1984.tb01108.x
- Ell, K., Nishimoto, R., Mediansky, L., Mantell, J., & Hamovitch, M. (1992). Social relations, social support, and survival among patients with cancer. *Journal of Psychosomatic Research*, *36*, 531-541. doi:10.1016/0022-3999(92)90038-4
- Esper, P., Hampton, J. N., Smith, D. C., & Pienta, K. J. (1999). Quality-of-life evaluation in patients receiving treatment for advanced prostate cancer. *Oncology Nursing Forum*, *26*, 107-112.
- Esper, P., Mo, F., Chodak, G., Sinner, M., Cella, D., & Pienta, K. J. (1997). Measuring quality of life in men with prostate cancer using the functional assessment of cancer therapy-prostate instrument. *Urology*, *50*, 920-928.
- Eton, D. T., & Lepore, S. J. (2002). Prostate cancer and health-related quality of life: A review of the literature. *Psycho-Oncology*, *11*, 307-326. doi: 10.1002/pon.572
- Eton, D. T., Lepore, S. J., & Helgeson, V. S. (2001). Early quality of life in patients with localized prostate carcinoma: an examination of treatment-related, demographic, and psychosocial factors. *Cancer*, *92*, 1451-1459. doi: 10.1002/1097-0142(20010915)92:6<1451
- Fitch, M. I., Gray, R., Franssen, E., & Johnson, B. (2000). Men's perspectives on the impact of prostate cancer: Implications for oncology nurses. *Oncology Nursing Forum*, *27*, 1255-1263. doi: 11013906
- Foster, C., Wright, D., Hill, H., Hopkinson, J., & Roffe, L. (2009). Psychosocial implications of living 5 years or more following a cancer diagnosis: A systematic review of the research evidence. *European Journal of Cancer Care (English Language Edition)*, *18*, 223-247. doi: 10.1111/j.1365-2354.2008.01001.x
- Goodwin, J. S., Hunt, W. C., Key, C. R., & Samet, J. M. (1987). The effect of marital status on stage, treatment, and survival of cancer patients. *Journal of the American Medical Association*, *258*(21), 3125-3130. doi: 10.1001/jama.1987.03400210067027
- Gotay, C. C., Holup, J. L., & Muraoka, M. Y. (2002). The challenges of prostate cancer: A major men's health issue. *International Journal of Men's Health*, *1*, 59-69.
- Grady, K. L. (1993). Quality of life in patients with chronic heart failure. *Critical Care Nursing Clinics of North America*, *5*, 661-670.
- Gray, R.E., 2003. *Prostate tales. Men's experiences with prostate cancer.* Harriman, TN: Men's Studies Press.
- Gray, R. E., Carroll, J. C., Fitch, M., Greenberg, M., Chart, P., & Orr, V. (1999). Cancer self-help groups and family physicians. *Cancer Practice*, *7*, 10-15. doi: 10.1046/j.1523-5394.1999.07101.x
- Gray, R. E., Fitch, M., Davis, C., & Phillips, C. (1997). Interviews with men with prostate cancer about their self-help group experience. *Journal of Palliative Care*, *13*, 15-21.
- Gray, R. E., Fitch, M., Phillips, C., Labrecque, M., & Fergus, K. (2000). Managing the impact of illness: The experiences of men with prostate cancer and their spouses. *Journal of Health Psychology*, *5*, 531-548. doi: 10.1177/135910530000500410

- Harden, J., Northouse, L., Cimprich, B., Pohl, J. M., Liang, J., & Kershaw, T. (2008). The influence of developmental life stage on quality of life in survivors of prostate cancer and their partners. *Journal of Cancer Survivors, 2*, 84-94. doi: 10.1007/s11764-008-0048-z
- Harrison, J., Maguire, P., & Pitceathly, C. (1995). Confiding in crisis: Gender differences in pattern of confiding among cancer patients. *Social Science and Medicine, 41*, 1255-1260. doi:10.1016/0277-9536(94)00411-L
- Hedestig, O., Sandman, P. O., Tomic, R., & Widmark, A. (2005). Living after external beam radiotherapy of localized prostate cancer: A qualitative analysis of patient narratives. *Cancer Nursing, 28*, 310-317. doi: 00002820-200507000-00013
- Hegarty, J. M., Wallace, M., & Comber, H. (2008). Uncertainty and quality of life among men undergoing active surveillance for prostate cancer in the United States and Ireland. *American Journal of Mens Health, 2*, 133-142. doi: 1557988307300467
- Helgason, A. R., Adolfsson, J., Dickman, P., Arver, S., Fredrikson, M., & Steineck, G. (1997). Factors associated with waning sexual function among elderly men and prostate cancer patients. *Journal of Urology, 158*, 155-159. doi: S0022-5347(01)64630-5
- Helgeson, V. S. (2003). Social support and quality of life. *Quality of Life Research, 12*, 25-31. doi:10.1023/A:1023509117524
- Helgeson, V. S., & Cohen, S. (1996). Social support and adjustment to cancer: Reconciling descriptive, correlational, and intervention research. *Health Psychology, 15*, 135-148. doi:10.1037/0278-6133.15.2.135
- Helgeson, V. S., & Lepore, S. J. (1997). Men's adjustment to prostate cancer: The role of agency and unmitigated agency. *Sex Roles, 37*, 251-267. doi:10.1023/A:1025651912128
- Helgeson, V. S., & Lepore, S. J. (2004). Quality of life following prostate cancer: The role of agency and unmitigated agency. *Journal of Applied Social Psychology, 34*, 2559-2585. doi: 10.1111/j.1559-1816.2004.tb01992.x
- Huang, G.J., Sadetsky, N., & Penson, D.F. (2010). Health related quality of life for men treated for localized prostate cancer with long-term followup. *Journal of Urology, 183*, 2206-2212.
- Hutchinson, G., Simeon, D. T., Bain, B. C., Wyatt, G. E., Tucker, M. B., & LeFranc, E. (2004). Social and health determinants of well being and life satisfaction in Jamaica. *International Journal of Social Psychiatry, 50*, 43-53. doi: 10.1177/002076400404040952
- Jacobson, N.S., Schmalings, K.B., & Holtz-Munroe, A. (1987). A component analysis of behavioral marital therapy: Two-year follow-up and prediction of relapse. *Journal of Marital and Family Therapy, 13*, 187-195.
- Janoff-Bulman, R. (2004). Posttraumatic growth: Three explanatory models. *Psychological Inquiry, 15*, 30-34. doi: 10.1207/s15327965pli1501_02
- Keitel, M. A., Zevon, M. A., Rounds, J. B., Petrelli, N. J., & Karakousis, C. (1990). Spouse adjustment to cancer surgery: Distress and coping responses. *Journal of Surgical Oncology, 43*, 148-153. doi: 10.1002/jso.2930430305
- Keyes, C. L. M., & Magyar-Moe, J. L. (2003). The measurement and utility of adult subjective well-being in positive psychological assessment. In S. J. Lopez & C. R. Synder (Eds.), *A handbook of models and measures* (pp. 411-425). Washington, DC: American Psychological Association. doi:10.1037/10612-026
- Kroenke, K., Spitzer, R.L., & Williams, J.B. (2003). The Patient Health Questionnaire -2: Validity of a two-item depression screener. *Medical Care, 41*, 1284-1292.

- Kornblith, A. B., Herr, H. W., Ofman, U. S., Scher, H. I., & Holland, J. C. (1994). Quality of life of patients with prostate cancer and their spouses. The value of a data base in clinical care. *Cancer*, *73*, 2791-2802. doi: 10.1002/1097-0142(19940601)73:11<2791
- Krishnasamy, M. (1996). Social support and the patient with cancer: A consideration of the literature. *Journal of Advanced Nursing*, *23*, 757-762. doi: 10.1111/j.1365-2648.1996.tb00048.x
- Krongrad, A., Lai, H., Burke, M. A., Goodkin, K., & Lai, S. (1996). Marriage and mortality in prostate cancer. *Journal of Urology*, *156*, 1696-1670. doi: S0022-5347(01)65485-5
- Lackner, S., Goldenberg, S., Arrizza, G., & Tjosvold, I. (1994). The contingency of social support. *Qualitative Health Research*, *4*, 224-243. doi: 10.1177/104973239400400206
- Leiber, L., Plumb, M. M., Gerstenzang, M. L., & Holland, J. (1976). Communication of affection between cancer-patients and their spouses. *Psychosomatic Medicine*, *38*, 379-389.
- Lepore, S. J., & Helgeson, V. S. (1998). Social constraints, intrusive thoughts, and mental health after prostate cancer. *Journal of Social and Clinical Psychology*, *17*, 89-106.
- Lepore, S. J., Helgeson, V. S., Eton, D. T., & Schulz, R. (2003). Improving quality of life in men with prostate cancer: A randomized controlled trial of group education interventions. *Health Psychology*, *22*, 443-452. doi: 10.1037/0278-6133.22.5.443
- Lintz, K., Moynihan, C., Steginga, S., Norman, A., Eeles, R., Huddart, R., . . . Watson, M. (2003). Prostate cancer patients' support and psychological care needs: Survey from a non-surgical oncology clinic. *Psycho-Oncology*, *12*, 769-783. doi: 10.1002/pon.702
- Llorente, M.D., Burke, M., Gregory, G.R., Bosworth, H.B., Grambow, S.C., Horner, R.D., . . . Olsen, E.J. (2005). Prostate cancer. A significant risk factor for late-life suicide. *American Journal of Geriatric Psychiatry*, *13*, 195-201. doi:10.1176/appi.ajgp.13.3.195
- Love, A. W., Scealy, M., Bloch, S., Duchesne, G., Couper, J., Macvean, M., . . . Kissane, D. W. (2008). Psychosocial adjustment in newly diagnosed prostate cancer. *Australian and New Zealand Journal of Psychiatry*, *42*, 423-429. doi:10.1080/00048670801961081
- Manne, S. (1998). Cancer in the marital context: A review of the literature. *Cancer Investigation*, *16*, 188-202. doi:10.3109/07357909809050036
- Manne, S., Sherman, M., Ross, S., Ostroff, J., Heyman, R. E., & Fox, K. (2004). Couples' support-related communication, psychological distress, and relationship satisfaction among women with early stage breast cancer. *Journal of Consulting and Clinical Psychology*, *72*, 660-670. doi: 10.1037/0022-006X.72.4.660
- Manne, S. L. (1999). Intrusive thoughts and psychological distress among cancer patients: The role of spouse avoidance and criticism. *Journal of Consulting and Clinical Psychology*, *67*, 539-546.
- Nicholas, D. R. (2000). Men, masculinity, and cancer: Risk-factor behaviors, early detection, and psychosocial adaptation. *Journal of American College Health*, *49*, 27-33. doi:10.1080/07448480009596279
- Parker, P. A., Baile, W. F., de Moor, C., & Cohen, L. (2003). Psychosocial and demographic predictors of quality of life in a large sample of cancer patients. *Psycho-Oncology*, *12*, 183-193. doi: 10.1002/pon.635
- Penson, D. F. (2007). Quality of life after therapy for localized prostate cancer. *The Cancer Journal*, *13*, 318-326. doi: 10.1097/PPO.0b013e3181570121
- Pirl, W. F., & Mello, J. (2002). Psychological complications of prostate cancer. *Oncology*, *16(11)*, 1448-1453.

- Polit, D., & Hungler, B. (1995). *Nursing research. Principles and methods.* (6th ed). New York, NY: Lippincott.
- Poole, G., Poon, C., Achille, M., White, K., Franz, N., Jittler, S., . . . Doll, R. (2001). Social support for patients with prostate cancer: The effects of support groups. *Journal of Psychosocial Oncology, 19*, 1-16. doi:10.1300/J077v19n02_01
- Ptacek, J. T., Pierce, G. R., & Ptacek, J. J. (2002). The social context of coping with prostate cancer. *Journal of Psychosocial Oncology, 20*, 61-80.
- Ptacek, J. T., Pierce, G. R., Ptacek, J. J., & Nogel, C. (1999). Stress and coping processes in men with prostate cancer: The divergent views of husbands and wives. *Journal of Social and Clinical Psychology, 18*, 299-324. doi: 35400008033178.0030
- Quartana, P. J., Schmaus, B. J., & Zakowski, S. G. (2005). Gender, neuroticism, and emotional expressiveness: Effects on spousal constraints among individuals with cancer. *Journal of Consulting and Clinical Psychology, 73*, 769-776. doi: 2005-11147-023
- Queenan, J. A., Feldman-Stewart, D., Brundage, M., & Groome, P. A. (2009). Social support and quality of life of prostate cancer patients after radiotherapy treatment. *European Journal of Cancer Care (Engl), 19*, 251-259.
- Revenson, T. A. (1994). Social support and marital coping with chronic illness. *Annals of Behavioral Medicine, 16*, 122-130.
- Reynolds, P., & Kaplan, G. A. (1990). Social connections and risk for cancer: Prospective evidence from the Alameda County study. *Behavioral Medicine, 16*, 101-110. doi:10.1080/08964289.1990.9934597
- Roberts, K. J., Lepore, S. J., & Helgeson, V. (2006). Social-cognitive correlates of adjustment to prostate cancer. *Psycho-Oncology, 15*(3), 101-110. doi:10.1002/pon.934
- Rodrigue, J. R., & Park, T. L. (1996). General and illness-specific adjustment to cancer: Relationship to marital status and marital quality. *Journal of Psychosomatic Research, 40*, 29-36. doi:10.1016/0022-3999(95)00540-4
- Roesch, S.C., Adams, L., Hines, A., Palmores, A., Vyas, P., Tran, C.,... Vaugh, A. (2005). Coping with prostate cancer: A meta-analytic review. *Journal of Behavioral Medicine, 28*, 281-293. doi: 10.1007/s10865-005-4664-z
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*, 141-166. doi: 10.1146/annurev.psych.52.1.141
- Ryff, C. D. (1989). Happiness is everything, or is it-Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*, 1069-1081. doi: 0022-3514/89/SOO. 75
- Ryff, C. D., & Keyes, C. L. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*, 719-727.
- Ryff, C. D., & Singer, B. (1996). Psychological well-being: Meaning, measurement, and implications for psychotherapy research. *Psychotherapy and Psychosomatics, 65*, 14-23. doi: 35400005246393.0020
- Ryff, C. D., & Singer, B. H. (2006). Best news yet on the six-factor model of well-being. *Social Science Research, 35*, 1103-1119. doi:10.1016/j.ssresearch.2006.01.002
- Ryff, C. D., Singer, B. H., & Love, G. D. (2004). Positive health: Connecting well-being with biology. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences, 359*, 1383-1394. doi: 10.1098/rstb.2004.1521

- Scholz, U., Knoll, N., Roigas, J., & Gralla, O. (2008). Effects of provision and receipt of social support on adjustment to laparoscopic radical prostatectomy. *Anxiety, Stress, & Coping, 21*, 227-241. doi: 10.1080/10615800801983759
- Sher, L. (2004). Post-traumatic stress disorder: The importance of recognition. *Australian and New Zealand Journal of Psychiatry, 38*, 84. doi:10.1111/j.1440-1614.2004.01303.x
- Sherbourne, C. D., & Stewart, A. L. (1991). The MOS social support survey. *Social Science and Medicine, 32*, 705-714. doi:10.1016/0277-9536(91)90150-B
- Sloan, J. A., Aaronson, N., Cappelleri, J. C., Fairclough, D. L., & Varricchio, C. (2002). Assessing the clinical significance of single items relative to summated scores. *Mayo Clinic Proceedings, 77*, 479-487. doi: 10.4065/77.5.479
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage & the Family, 38*, 15-28. doi: 10.2307/350547
- Springer, K.W. & Hauser, R.M. (2003). An assessment of the construct validity of Ryff's Scales of Psychological Well-Being: Method, mode, and measurement effects. *Social Science Research, 35*, 1080-1102. doi: 10.1016/j.ssresearch.2005.07.004
- Taylor, S. E., Falke, R. L., Shoptaw, S. J., & Lichtman, R. R. (1986). Social support, support groups, and the cancer patient. *Journal of Consulting and Clinical Psychology, 54*, 608-615. doi:10.1037/0022-006X.54.5.608
- Testa, M. A., & Simonson, D. C. (1996). Assessment of quality-of-life outcomes. *New England Journal of Medicine, 334*, 835-840. doi: 10.1056/NEJM199603283341306
- Thibault, J.M., & Steiner, R.W. (2004). Efficient identification of adults with depression and dementia. *American Family Physician, 70*, 1101-1110.
- Visser, A., van Andel, G., Willems, P., Voogt, E., Dijkstra, A., Rovers, P., . . . Kurth, K. H. (2003). Changes in health-related quality of life of men with prostate cancer 3 months after diagnosis: The role of psychosocial factors and comparison with benign prostate hyperplasia patients. *Patient Education and Counseling, 49*, 225-232. doi:10.1016/S0738-3991(02)00221-5
- Ward, P. J., Lundberg, N. R., Zabriskie, R. B., & Berrett, K. (2009). Measuring marital satisfaction: A comparison of the revised Dyadic Adjustment Scale and the Satisfaction with Married Life Scale. *Marriage & Family Review, 45*, 412-429. doi:10.1080/01494920902828219
- Wellman, B., & Wortley, S. (1990). Different strokes from different folks: Community ties and social support. *American Journal of Sociology, 96*, 558-588. doi: 10.2307/2781064
- Wills, T.A., & Shiner, O. (2000). Measuring perceived and received social support. In S. Cohen, L. Underwood & B. Gottlieb (Eds.), *Social support measurement and interventions: A handbook for health and social scientists*, (pp.860-131.) New York, NY: Oxford.
- Wooten, A. C., Burney, S., Foroudi, F., Frydenberg, M., Coleman, G., & Ng, K. T. (2007). Psychological adjustment of survivors of localised prostate cancer: Investigating the role of dyadic adjustment, cognitive appraisal, and coping style. *Psycho-Oncology, 16*, 994-1002. doi: 10.1002/pon.1159
- Wortman, C. B. (1984). Social support and the cancer patient. Conceptual and methodologic issues. *Cancer, 53*, 2339-2362.

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SPECIALTY LICENSURE: Year: 1979
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EDUCATION

1978	University of Kentucky College of Nursing Lexington, Kentucky	BSN
2003	University of Kentucky College of Nursing Lexington, Kentucky	MSN
2006	University of Kentucky College of Education Counseling Psychology Lexington, Kentucky	EdS

PROFESSIONAL EXPERIENCE

1976 - 1978	Nursing Student Assistant	University of Kentucky Lexington, Kentucky
1977 (Summer)	Summer Internship	St. Luke's Hospital Houston, Texas
1978 (Summer)	Head Nurse/Manager Of Infirmery Children,	Camp for Emotionally Disturbed Poughkeepsie, New York
1978 - 1979	Primary Care Nurse	University of Kentucky Medical Center Lexington, Kentucky
1979	Staff Nurse	University of Birmingham Birmingham, England
1980	Staff Nurse	University of Birmingham Birmingham, England

1980 (Summer)	Staff Nurse	King's Daughter's Hospital Ashland, Kentucky
1981	Staff Nurse	Out Patient Clinic Lancaster, England
1984 - 1986	On-Call Pool	University of Kentucky Medical Center Lexington, KY
1986 - 1987	Public Health Nurse	Caretenders Lexington, KY
1989 - 1990	Nurse	Insurance Company Lexington, Kentucky
1993 - 1995	Staff Nurse	Good Samaritan Hospital Pain Clinic Lexington, Kentucky
1998 - 2003	Assistant Professor	Lexington Community College Lexington, Kentucky
2003 – 2004	Instructor	Midway College Midway, Kentucky
2004-present	Coordinator of Second Degree Option Nursing	University of Kentucky College of Lexington, Kentucky

PRESENTATIONS

International

Brockopp, D., Walmsley, L., & Wagner, K. (2005). *Educating the educated*. Paper presented at annual Nurse Education Tomorrow: Networking for Education in Healthcare Conference, Durham, England.

Walmsley, L., Moe, K., Brockopp, D., & Davis, J. (2006). *Educating the educated: Development and evaluation of a second degree option*. Paper presented at 17th International Nursing Research Congress on Evidence-Based Practice, Montreal, Canada.

Bulter, K., Diebold, C., Walmsley, L., Moe, Kr., & Brockopp, D. (2006). *Use of the learning and study strategies inventory (LASSI) in a second-degree nursing program*. Paper presented at 12th Annual International Participative Conference, Education in Healthcare, University of Durham, England.

Brockopp, D., Walmsley, L., Moe, K., Dampier, L. & Hensley, V. (2007). *Identity maps: A strategy to enhance the success of second-degree students*. Paper presented at 18th International Nursing Research Congress Focusing on Evidence-Based Practice, Vienna, Austria.

Warden, S., Ghaelian, B., Walmsley, L., Raymer, S., Brockopp, D. (2007, July). *Success in Nursing Education: Improving the Teaching/Learning Process for Faculty and International Students*. 18th International Nursing Research Congress Focusing on Evidence-Based Practice, Vienna, Austria.

Brockopp, D., Walmsley, L., Moe, K., Dampier, L. & Hensley, V. (2007, July). *Identity Maps: A Strategy to Enhance the Success of Second-Degree Students*. 18th International Nursing Research Congress Focusing on Evidence-Based Practice, Vienna, Austria.

PUBLICATIONS

Brockopp, D., Moe, K., Walmsley, L., Davis, J., Butler, K., Diebold, C. & Maiti, S. (2009). Evaluating second- degree students' academic performance, abilities and satisfaction: A pilot project. *Nursing Education Perspectives*.

Moe, K., Brockopp, D., Yackzan, S., Abner, Walmsley, L. A. (2013). Psychological well-being, social support, depression and distress among women. *Psychology of Women Quarterly* (Submitted)

Moe, K., Brockopp, D., Schreiber, J., Yackzan, S., Abner, J., Hatch, J., McKinney, E., & Walmsley, L. A. (2013). The Psychological Well-Being of Women Pre- and Post- Diagnosis of Breast Cancer. *Psychosocial Oncology*. (Submitted)

PROFESSIONAL ACTIVITY

Professional Memberships

1980-Present	Alumni Association, University Of Kentucky
1980-Present	Alumni Association, University Of Kentucky College Of Nursing
2004-Present	American Education Research Association
1980-Present	American Nursing Association
1980-Present	Kentucky Nursing Association
2004-Present	Kentucky Psychological Association
	• Division 51
	National League For Nursing
2003-Present	Sigma Theta Tau International Honor Society Of Nursing