



**Coping Strategies and Emotional Distress of Prostate Cancer Patients
and Their Spouses**

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Master of Nursing Science (International Program)**

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| ชื่อวิทยานิพนธ์ | วิธีการจัดการความเครียดและภาวะบีบคั้นทางอารมณ์ของผู้ป่วยมะเร็ง ต่อมลูกหมากและกลุ่มสมรส |
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บทคัดย่อ

งานวิจัยเชิงบรรยายนี้มีวัตถุประสงค์ เพื่อศึกษาความสัมพันธ์ระหว่างวิธีการจัดการความเครียด ภาวะบีบคั้นทางอารมณ์ของผู้ป่วยมะเร็งต่อมลูกหมากและกลุ่มสมรส กลุ่มตัวอย่างประกอบด้วยผู้ป่วยมะเร็งต่อมลูกหมากและกลุ่มสมรส 40 คู่ ที่มารับการรักษาที่คลินิกระบบทางเดินปัสสาวะและหอผู้ป่วยศัลยกรรมชายในโรงพยาบาล 2 แห่งทางภาคใต้ของประเทศไทย เก็บข้อมูลโดยใช้แบบประเมินวิธีการจัดการกับความเครียดฉบับย่อ (the Brief COPE) จำนวน 28 ข้อ และแบบประเมินภาวะทางอารมณ์ฉบับย่อ (the Profile of Mood State-Brief) จำนวน 30 ข้อ ข้อมูลที่ได้นำมาวิเคราะห์ความสัมพันธ์โดยใช้สถิติสัมประสิทธิ์ความสัมพันธ์ของเพียร์สัน

ผลการวิจัยพบว่า ผู้ป่วยและคู่สมรสใช้วิธีการจัดการความเครียด 6 ลำดับแรกเหมือนกัน แต่แตกต่างที่ลำดับของความถี่ในการเลือกใช้วิธีการจัดการความเครียดนั้น ผู้ป่วยมีภาวะบีบคั้นทางอารมณ์สูงกว่าคู่สมรส นอกจากนี้พบว่า วิธีการจัดการกับความเครียดของผู้ป่วยมีความสัมพันธ์กับภาวะบีบคั้นทางอารมณ์ของผู้ป่วยอย่างมีนัยสำคัญทางสถิติ และวิธีการจัดการความเครียดของคู่สมรสมีความสัมพันธ์กับภาวะบีบคั้นทางอารมณ์ของคู่สมรสอย่างมีนัยสำคัญทางสถิติเช่นเดียวกัน นอกจากนี้การใช้วิธีการจัดการกับความเครียดด้วยการลงมือกระทำ (active coping) ของผู้ป่วย มีความสัมพันธ์เชิงลบกับภาวะบีบคั้นทางอารมณ์ของคู่สมรสอย่างมีนัยสำคัญทางสถิติ ($r = -.34, p < .05$) ถึงแม้ว่าภาวะบีบคั้นทางอารมณ์ของผู้ป่วยและคู่สมรสไม่มีความสัมพันธ์อย่างมีนัยสำคัญทางสถิติ อย่างไรก็ตามผลการวิจัยพบว่าภาวะอารมณ์ (mood factors) ของผู้ป่วยและคู่สมรสมีความสัมพันธ์อย่างมีนัยสำคัญทางสถิติ เช่น ภาวะอารมณ์เครียด-วิตกกังวล (Tension-Anxiety) ของผู้ป่วย มีสัมพันธ์เชิงบวกอย่างมีนัยสำคัญทางสถิติกับภาวะอารมณ์เครียด-วิตกกังวล (Tension-Anxiety) ($r = .41, p < .01$) และภาวะอารมณ์ซึมเศร้า-ปฏิเสธ (Depression-Dejection) ($r = .37, p < .05$) ของคู่สมรส รวมทั้งภาวะอารมณ์ซึมเศร้า-ปฏิเสธ (Depression-Dejection) ของผู้ป่วยมีความสัมพันธ์เชิงบวกอย่างมีนัยสำคัญทางสถิติกับภาวะอารมณ์ซึมเศร้า-ปฏิเสธ (Depression-Dejection) ($r = .31, p < .05$) ของคู่สมรส

จากผลการศึกษาครั้งนี้ จะเห็นว่าวิธีการจัดการกับความเครียดและภาวะบีบคั้นทาง
อารมณ์ของผู้ป่วยและคู่สมรสมีความสัมพันธ์กัน ดังนั้นพยาบาลควรเห็นความสำคัญและประเมิน
วิธีการจัดการกับความเครียด และภาวะบีบคั้นทางอารมณ์ทั้งในผู้ป่วยมะเร็งต่อมลูกหมากและคู่
สมรส เพื่อส่งเสริมการให้ผู้ป่วยมะเร็งต่อมลูกหมากและคู่สมรส เลือกใช้วิธีการจัดการกับเครียดที่
เหมาะสมและลดภาวะบีบคั้นทางอารมณ์ได้อย่างมีประสิทธิภาพ

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ABSTRACT

This study aimed at determining coping strategies and emotional distress of prostate cancer patients and their spouses and to examine the relationship between the two variables. Forty prostate cancer patients and their spouses were recruited as couples from urology outpatient clinics and male surgical departments at two selected hospitals in southern Thailand. Twenty eight items of the Brief COPE was used as an instrument to identify the coping strategies. Thirty items of the Profile of Mood State-Brief (POMS-B) was used as an instrument to measure the emotional distress of the participants. Pearson's product moment correlation was used to examine the relationship between the coping strategies and emotional distress of the prostate cancer patients and their spouses.

Six of the most commonly used coping strategies used by the patients and spouses were similar though they were ranked differently. The patients indicated they experienced higher emotional distress compared to the spouses. The patients' coping strategies had a statistically significant correlation with their emotional distress and so did the spouses'. There was a statistically significant negative relationship between the patients' active coping and the spouses' emotional distress ($r = -.34$,

$p < .05$). There was no statistically significant relationship between the patients' and their spouses' emotional distress, but there was a statistically significant relationship between the mood factors of the patients and their spouses. The patients' Tension-Anxiety had a statistically significant positive correlation with the spouses' Tension-Anxiety ($r = .41, p < .01$), and Depression-Dejection ($r = .37, p < .05$). The patients' Depression-Dejection had a statistically significant positive correlation with the spouses' Depression-Dejection ($r = .31, p < .05$).

The findings suggest that there are relationships between the coping strategies and emotional distress of prostate cancer patients and their spouses. Therefore, a comprehensive assessment of these important issues is needed to enhance appropriate coping strategies and reduce the emotional distress of the patients and their spouses.

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CHAPTER 1

INTRODUCTION

Background and Significance of the Problem

Prostate cancer is a harmful disease which affects males. It is a severe health problem that is found all over the world. The incidence of prostate cancer in Thailand is 3.5 per 100,000 of the male population (Vootipruk, 2007). It is ranked the seventh most common form of cancer in men (Vootipruk, 2007). Although prostate cancer is rare in men under 50 years old, its incidence is increasing rapidly in men who are above 50 years old (Vootipruk, 2007). However, the survival rate of patient is higher than in the past, but the patients suffer from long term side effects brought about by the disease and its treatment (Bokhour, Clark, Inui, Silliman, & Talcott, 2001; Burt, Caelli, Moore, & Anderson, 2005; Haden et al., 2002; Jacobsson, Hallberg, & Loven, 1997; 2000; 2001).

Although most of patients with prostate cancer survive for five years, the treatment and its linked operations involve significant uncertainty (Bokhour et al., 2001). Patients with prostate cancer suffer from long term side effects of prostate cancer and its treatment, and these include urinary incontinence, bowel problems, micturition problems, decreased libido and sexual dysfunction (Bokhour et al, 2001; Burt et al., 2005; Haden et al., 2002; Jakobsson et al., 1997; 2000; 2001). According to Weber and colleagues, (2004), the side effects of cancer and its treatment, such as urinary incontinence and sexual dysfunction, are expected to have a negative impact on the depression of patients with prostate cancer over time. Moreover, a partner

having prostate cancer and receiving treatment brings stress to a married couple and their marriage (Yoshimoto et al., 2006).

The diagnosis of prostate cancer and its treatment affects both the lives of the patients and their spouses. It has been found that not only the prostate cancer patients, but also their spouses suffer from the impact of cancer on their relationship (Haden et al., 2002; Jakobsson et al., 2001). In addition, results from a study showed that the prostate cancer can affect psychosocial aspects in both patients with prostate cancer and their spouses (Northouse et al., 2007). Therefore, patients with prostate cancer and their spouses usually face the problem of being affected by prostate cancer and its treatment together. Spouses of patients with prostate cancer are important, as they provide support to the patients. In Thai culture, a spouse is a primary person who provides care and support to patients. If spouses are affected by the disease and its treatment, they will not be able to provide effective support to the patients.

When patients with prostate cancer and their spouses face stress because of the prostate cancer, they try to deal with the stressful event by using coping strategies. Coping strategies are associated with levels of emotional distress, involving anxiety, depression and cancer-related worries (Deiming et al., 2006). Patients with prostate cancer, who use problem-focused, and emotion-focused approaches to cope, feel healthier, both psychologically and physically (Roesch et al., 2005). In contrast, patients with prostate cancer who use avoidance strategies to cope experience heightened negative psychological adjustment and physical health.

Furthermore, higher distress in patients with prostate cancer is associated with higher distress in their spouses (Eton, Lepore, & Helgeson, 2005). Similarly, spouses of patients with prostate cancer are at risk of developing distress

which does not differ from the patients' distress (Northouse et al., 2007). However, there are only a few studies that have examined relationships between prostate cancer patients and their spouses, as most studies of prostate cancer patients have focused on experience of the cancer and its treatment (Bokhour et al, 2001; Burt et al., 2005; Haden et al., 2002; Jacobsson et al., 1997; 2000; 2001). Moreover, all the studies that have examined the relationship among prostate cancer patients and their spouses were conducted in Western countries. These countries have different cultures and religious belief compared with Eastern countries like Thailand.

No study in Thailand has reported the relationships between coping strategies and emotional distress in patients with prostate cancer and their spouses. Only a few studies have been published about the experiences of spouses of patients with cancer. A qualitative study focused on the care-giving experiences of female spouses of cancer patients who were undergoing radiotherapy (Kitrungote, Wonghongkul, Chanprasit, Suttharangsee, & Cohen, 2008). One major theme of the findings showed that they also suffered equally with the patients. They experienced suffering as a co-sufferer, because of the strain of care-giving and difficulties associated with making new living arrangements.

Another quantitative study focused on stress and the coping strategies of the spouses of cancer patients who were receiving chemotherapy (Thaiglang, 1999). The findings suggested that spouses of the patients prefer to solve their own problem and to seek social support rather than avoiding the problems. Surprisingly, this study also found that there was a relationship between a spouses' stress that was related the perceptions of a patient's health status and confrontational coping strategies. However, these studies could not clearly indicate a relationship between

cancer patients and their spouses. In particular, no relationship was found between the coping strategies and emotional distress of prostate cancer patients and their spouses. Furthermore, it is essential to focus on both the prostate cancer patients' and their spouses' coping strategies and emotional distress, as these may have a negative effect on each other. Consequently, there is a need to study the coping strategies and emotional distress of prostate cancer patients and their spouses.

This study was aimed at examining the relationship between coping strategies and emotional distress in prostate cancer patients and their spouses. The findings from this study should benefit health care teams and bring about nursing care enhancement of the patients and their spouses.

Objectives of Research

1. To describe the coping strategies of prostate cancer patients and their spouses.
2. To examine the extent of the emotional distress of prostate cancer patients and their spouses.
3. To examine the relationship between coping strategies and the emotional distress of prostate cancer patients.
4. To examine the relationship between coping strategies and the emotional distress of spouses of prostate cancer patients.
5. To examine the relationship between coping strategies of prostate cancer patients and the emotional distress of spouses of the patients.
6. To examine the relationship between coping strategies of the spouses of prostate cancer patients and the emotional distress of the patients.

7. To examine the relationship between emotional distress of prostate cancer patients and emotional distress of spouses of the patients.

Research Questions

1. What coping strategies are used by prostate cancer patients and their spouses?

2. To what extent the emotional distress of prostate cancer patients and their spouses?

3. Is there a relationship between coping strategies and the emotional distress of prostate cancer patients?

4. Is there a relationship between coping strategies and the emotional distress of the spouses of prostate cancer patients?

5. Is there a relationship between coping strategies of prostate cancer patients and the emotional distress of spouses of the patients?

6. Is there a relationship between coping strategies of spouses of prostate cancer patients and the emotional distress of the patients?

7. Is there a relationship between the emotional distress of prostate cancer patients and the emotional distress of spouses of the patients?

Conceptual Framework

Prostate cancer patients and their spouses are at risk of developing emotional distress. When emotional distress occurs, they can use coping strategies to minimize it. A cognitive theory of stress and coping was developed by Lazarus and

Folkman (1984). According to the theory, stress has been defined as either a stimulus or a response (Lazarus & Folkman, 1984). The stimulus definition focuses on events in the environment, including illness. Moreover, stress is defined as the relationship between an individual and his/her environment which is appraised by the individual as exceeding his/her resources and endangering his/her well-being. Cognitive appraisal refers to an evaluative cognitive process which intervenes between the encounter and the reaction. Through cognitive appraisal processes an individual evaluates an illness for his/her well-being.

This cognitive appraisal model of stress (Lazarus & Folkman, 1984) has been used to guide the studies about couples experiencing prostate cancer and breast cancer. It has also been used to identify factors that predict patient and spouse's role problems and emotional distress (Harder et al., 2002; Northouse, Mood, Templin, Mellon, & George, 2000; Northouse, Templin, Mood, & Oberst, 1998). In this model, an illness-related factor is one of antecedent conditions that are mediated by an individual's cognitive appraisal. According to the model, prostate cancer is an antecedent condition that is mediated by the coping strategies of patients and their spouses. This mediation will affect their emotional distress, and this will be treated as an outcome of this study.

In the present study, a model of coping strategies and emotional distress of prostate cancer patients and their spouses has been developed. This is based on a cognitive theory of stress and coping (Lazarus and Folkman, 1984), a model of the factors predicting patient and spouse adjustment (Northouse et al., 1998), and the literature dealing with the impact of prostate cancer and its treatment as it affects the lives of patients and their spouses. The spouses of prostate cancer

patients feel distressed, anxious, depressed, and alienated due to the diagnosis of prostate cancer and its treatment (Keitel, Zevon, Rounds, Petrelli, & Karakousis, 1990 cited by Hawes et al., 2006). Moreover, the patients' problems in carrying out their roles and the associated emotional distress has a strong effect on their spouses' problems relating to their roles and emotional distress (Northouse, Templin & Mood, 2001; Northouse et al., 1998) Thus the coping strategies and emotional distress of patients with prostate cancer and their spouses have effects on each other. The model used in this study only considers the relationships between coping strategies and the emotional distress of prostate cancer patients and their spouses (see figure 1).

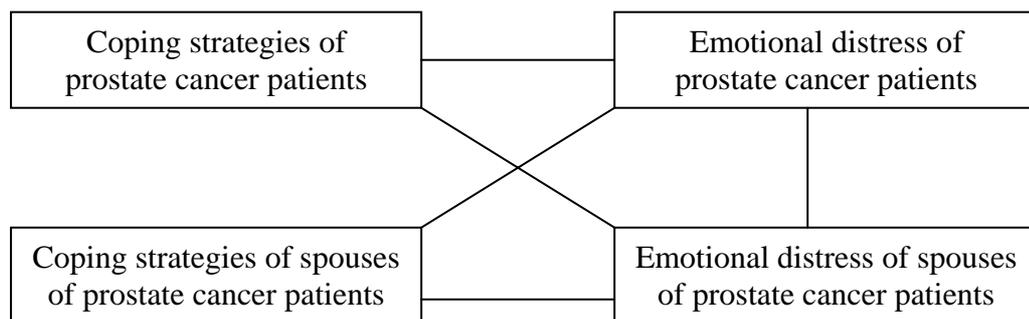


Figure 1 *Coping Strategies and Emotional Distress of Prostate Cancer Patients and Their Spouses.*

Hypotheses

1. There is a relationship between coping strategies and the emotional distress of prostate cancer patients.
2. There is a relationship between coping strategies and the emotional distress of the spouses of prostate cancer patients.
3. There is a relationship between coping strategies of prostate cancer patients and the emotional distress of spouses of the patients.

4. There is a relationship between coping strategies of spouses of prostate cancer patients and the emotional distress of the patients.

5. There is a relationship between the emotional distress of prostate cancer patients and the emotional distress of spouses of the patients.

Definitions of Terms

Coping strategies are defined as cognitive and/or behavioral activities that prostate cancer couples use to master, tolerate, reduce, or minimize the stressful events of prostate cancer. Coping strategies in prostate cancer patients and their spouses were measured by the Brief COPE (Carver, 1997). The Brief COPE consists of 28 items relating to 14 different coping strategies. These strategies are self-distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting feelings, positive reframing, planning, humor, acceptance, religion, and self-blame. The higher scores indicate that coping strategies were used more often by the subjects.

Emotional distress is defined as mood disturbance in prostate cancer patients and their spouses caused by cancer and its treatments. The emotional distress of prostate cancer patients and their spouses was measured by the Profile of Mood States-Brief (POMS-B) (McNair & Heuchert, 2008). This includes six identified mood factors: Tension-Anxiety, Depression-Dejection, Anger-Hostility, Vigor-Activity, Fatigue-Inertia, and Confusion-Bewilderment. The higher values indicate greater mood disturbance. Higher mood disturbance scores indicate higher emotional distress.

Scope of the Study

This study focused only on examining coping strategies, emotional distress and the relationship between coping strategies and emotional distress of prostate cancer patients and their spouses. The subjects involved in this study were prostate cancer patients and their spouses attending for treatment at two regional government hospitals in southern Thailand from January 4, 2009 to April 29, 2009. Only patients who were living with their spouses were involved in this study.

Significance of the Study

The results of the study could be applied as guidelines to provide appropriate interventions on managing prostate cancer patients and their spouses with respect to their coping strategies and emotional state. It can also enhance knowledge and understanding of coping strategies and the emotional state of prostate cancer patients and their spouses. Finally it could be lead to other research in order to encourage the development of coping strategies and emotional state of prostate cancer patients and their spouses.

CHAPTER 2

LITERATURE REVIEW

This chapter provides a review of literature on the following concepts: (1) overview of prostate cancer, (2) impact of prostate cancer and its treatment on patients and their spouses, (3) coping strategies, (4) emotional distress, and (5) the relationship between coping strategies and emotional distress of prostate cancer patients and their spouses.

1. Overview of Prostate Cancer

1.1 Etiology and Pathophysiology of Prostate Cancer (American Cancer Society [ACS], 2007)

Prostate cancer is the most common type of cancer in men after middle age (Prostateline, 2007). The prostate is a gland which is found in males. It is about the size of a walnut and is located internally in front of the rectum, and just behind the base of the penis. The prostate surrounds the internal part of the urethra, the tube that carries urine and semen out of the penis. The function of the prostate gland is to produce some of the seminal fluid (or semen) which protects and nourishes sperm cells. Testosterone, also called androgen, is the main hormone in males, and it causes the prostate gland to grow and stay healthy.

Prostate cancer develops from cells of the prostate gland. Almost all prostate cancers are adenocarcinomas, meaning that they develop from glandular cells. Prostate cancer generally grows slowly within the gland but, as it grows, it can

eventually penetrate the outer rim of the gland. When this happens it may spread directly to tissues or organs near the prostate gland. Eventually, the cancer cells may spread (metastasize) to distant parts of the body, particularly bones.

If it spreads, prostate cancer tends to go through lymphatic vessels to nearby lymph nodes in the pelvis. Lymph is clear fluid that contains tissue waste products and immune system cells. Lymphatic vessels carry this fluid to lymph nodes. Cancer cells may enter the lymphatic vessels and spread out along these vessels towards the lymph nodes, where they can continue to grow. If prostate cancer cells have reached the pelvic lymph nodes, it is likely that they have spread to other organs of the body too.

The prostate gland is surrounded by bundles of nerves and blood vessels. The nerves which run along outside the prostate gland help the erection process of the penis. Cancer treatments can destroy or damage these nerves, resulting in erectile dysfunction which is also known as impotence.

1.2 Stages of Prostate Cancer

A prostate cancer's stage indicates how far the cancer has spread within the prostate, to nearby tissues and to other organs. Two staging systems, which have been standardized to describe the extent of the cancer, are the Whitmore-Jewett staging method and the TNM system.

There are four stages of prostate cancer based on the Whitmore-Jewett staging method (Dunnick, Sandler, Amis, Newhouse, McCallum, 1997). These are as follows:

1. Stage A: In this stage, the carcinoma has no manifestations and it is also not palpable on digital rectal examination (DRE). Stage A can be divided into

two stages, namely stage A₁ and stage A₂. In stage A₁, carcinoma consists of a small focus of tumor entirely within the substance of the prostate. In Stage A₂ it is diffused in the prostate; it is not palpable and does not invade through the capsule.

2. Stage B: In this stage, the carcinoma is clinically palpable; there is a firm nodule in the peripheral zone without evidence of capsular transgression or distant extension. Stage B can be divided into two stages, namely stage B₁ and stage B₂. In Stage B₁ the size of the nodule is less than 1.5 cm in diameter, whereas in stage B₂ there is a larger nodule which usually involves both sides of the prostate.

3. Stage C: In this stage, the carcinoma transgress the capsule. Digital rectal examination reveals a less well-defined firmness, perhaps extending to the seminal vesicle. In addition, 50% of the patients with stage C carcinoma have metastases to pelvic lymph nodes.

4. Stage D: In this stage, the carcinoma may present problems with urinary symptoms. There is a palpable extension of the tumor beyond the confines of the prostatic capsule, bone metastases, and hydronephrosis due to ureteral obstruction by carcinoma at the ureterovascular junction. Stage D can be divided into two stages, namely stage D₁ and stage D₂. Stage D₁ refers to the extraprostatic spread of tumor to the pelvic nodes only, whereas stage D₂ pertains to all other types of metastatic spread.

Similarly, there are four stage of prostate cancer based on the TNM system (ACS, 2007). In the TNM staging system “T” stands for the extent of the primary tumor, “N” stands for the absence or presence of spread to the nearby lymph node, and “M” represents the absence or presence of spread to distant organs. Although T, N, M in this staging system is combined with a single Roman numeral

I - IV, this is not often needed for the prostate cancer staging because each stage relates to the “T” stage. The stages of prostate cancer as follows:

1. Stage I = T1: In this stage the tumor is not found during the rectal examination, but the cancer cells are found in a prostate biopsy or prostatectomy specimen.

2. Stage II = T2: In this stage the tumor is found during the rectal examination and the cancer is thought to remain within the prostate gland.

3. Stage III = T3: In this stage the cancer spreads beyond the outer rim that surrounds the glands. The cancer also reaches the connective tissue next to the prostate and/or the seminal vesicles, but does not spread to any other organs.

4. Stage IV = T4: In this stage the cancer spreads to tissue next to the prostate other than the seminal vesicles. This may be the bladder neck or its external sphincter, the rectum, the muscles in the pelvis, or the wall of the pelvis.

1.3 Treatment for Prostate Cancer

The choice of prostate cancer treatment includes watchful waiting (no treatment), surgery (prostatectomy), radiotherapy, hormonal therapy, and chemotherapy. The treatment will depend on the stage of the cancer but prostatectomy is the main treatment for patients (Cancer Center of Songklanagarind Hospital, 2007; ACS, 2007).

In radical prostatectomy, the surgeons remove the entire prostate gland plus some tissue around it. This operation is used most often if the cancer does not appear to have spread to the outside of the gland. There are two types of radical prostatectomy, namely radical retropubic prostatectomy, and radical perineal prostatectomy.

In radiation therapy, high energy rays or particles are used to kill cancer cells. Radiation is sometime used to treat prostate cancer that is still confined to the prostate gland or has spread to nearby tissue. If the disease is more advanced, radiation may be used to reduce the size of the tumor or to provide pain relief when the cancer has spread to the bones. The two main types of radiation therapy are external beam radiation and brachytherapy (internal radiation).

Hormonal therapy is often used for patients whose prostate cancer has spread beyond the prostate or has regenerated after treatment. The goal of hormonal therapy is to block the effects of the male hormones. It can also be combined with radiation therapy for certain stage T3 cancers.

Chemotherapy is an option for patients whose prostate cancer has spread outside of the prostate gland and for patients for whom the hormone therapy is no longer effective. It cannot destroy all the cancer cells, but it can shrink the cancer or slow its growth and reduce pain.

2. Impact of Prostate Cancer and Its Treatment on Patients and Their Spouses

2.1 Physiologicl Impacts

Many studies have demonstrated that prostate cancer and its treatments affect patients' urinary, sexual, and bowel health.

Jokobsson and colleagues, (1997) interviewed 11 prostate cancer patients about their experiences of daily life and their quality of life. The findings indicated that the patients experience difficulties in their daily life due to their illness.

These may include micturition problems, fatigue, pain, altered relationships with wives and families, and sexual problems.

Jakobsson and colleagues, (2000) interviewed 25 men with prostate cancer. The results of the study showed that problems with micturition, catheter treatment and problems with their sexual life affect patients. These radically affect the patients' autonomy, quality of life and change their continuum of life. In addition, the researcher found evidence that the patients' physical deterioration, fear of ridicule and wish to hide from others were also linked together. From the findings the experiences of the patients were described as the negative consequences resulting from being patients with prostate cancer and being treated for it.

In 2001, Bokhour and colleagues, (2001) conducted a study in 48 early prostate cancer patients after treatment. The findings showed that erectile dysfunction is the most common side effect of treatment for early prostate cancer, and this has far-reaching effects upon males' lives. The males feel that this sexual dysfunction has a substantial effect on the quality of their lives. In this study, there were four domains in the quality of life relating to males' sexuality, namely, the quality of sexual intimacy, everyday interactions with women, sexual imagination and their fantasy life, and males' perception of their masculinity. Moreover, erectile problems affect males in both their intimate and non-intimate lives, including how they see themselves as sexual beings.

A study by Weber, Chumbler, Algoog, Roberts, & Mills (2007) assessed the relationships between post-radical prostatectomy with urinary dysfunction, sexual dysfunction, bowel dysfunction, and the physical dysfunction in 72 prostate cancer patients. The study revealed that sexual dysfunction is the highest

prevailing symptom from the side effects of treatments. However, prostate cancer patients perceive that urinary dysfunction, in terms of urinary incontinence, is the most bothersome.

In summary, the common physical impacts of prostate cancer and its treatments that affect prostate cancer patients are urinary incontinence, bowel problems, micturition problems, and sexual dysfunction.

2.2 Psychological Impacts

The diagnosis and treatment of prostate cancer not only affect the physiologic of patients but also their spouses.

Moore and Estey (1999) conducted a study in 63 males after radical prostatectomy. They found that this process, next to surgery, is definitely stressful and significantly affects the quality of life of both prostate cancer patients and their spouses. The time from discharge to approximately 3 months after the operation is described as stressful and frustrating. In addition, patients who are impotent after the operation find it very difficult to adjust to erectile dysfunction. In the same way, wives are equally interested in obtaining treatment for their spouses' erectile dysfunction. The wives worry about their husbands' sense of self-esteem, particularly if they were enjoying a comfortable sexual relationship prior to surgery, and which ended abruptly.

Jakobsson and colleagues (2001) conducted a study to investigate sexual problems, due to illness, in males with prostate cancer compared to those with benign prostatic hyperplasia and the healthy male population. The study described the impact of the disease on frequency of intercourse and level of sexual satisfaction prior

to and after treatment. The result reported that males with prostate cancer had a higher frequency of psychological shortcomings in their sexual life than in their physical life.

A study from Hawes and colleagues, (2006) described problems faced by spouses or partners of patients with prostate cancer (N=66). They found that there are four categories of problems, namely, treatment and side effect issues, patient issues, family issues, and spouses' issues. The spouses' issues are identified as the most frequent problems faced by the spouses or partners. Most commonly reported spouses' issues are emotional well-being and emotional balance. The emotional well-being problems included: the need for time for self, self esteem, anxiety, temper, guilt, stress, and concern for their and their spouses' declining health. This study also showed that spouses or partners of prostate cancer patients play a critical role when their loved ones have cancer.

In summary, the psychological impacts in patients with prostate cancer and their spouses occurred due to physical impacts or unwanted effects caused by the treatment and the cancer.

3. Coping Strategies

3.1 Definitions of Coping Strategies

Coping is defined as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141).

Coping strategies refer to the specific efforts, both behavioral and psychological, that the person employs to master, tolerate, reduce, or minimize stressful events (John & Catherine, 1999).

In the present study, coping strategies are defined as cognitive and/or behavioral activities that couples facing prostate cancer use to master, tolerate, reduce, or minimize the stressful events associated with prostate cancer.

3.2 Dimensions of Coping Strategies

Lazarus and Folkman (1984) consider coping to be a process that changes over time and across situations; this is in contrast to trait approaches that view coping more as a stable personality dimension. There are three main features of the process approach to coping. First, observations and assessment, which is concerned with what a person actually thinks or does, which is also the concern of the trait approach. Second, what the person actually thinks or does is examined within a specific context. Third, to speak of a coping process means speaking of change in coping thoughts and acts as a stressful encounter unfolds.

Lazarus and Folkman (1984) divided cognitive appraisal into two stages, namely primary appraisal and secondary appraisal. In primary appraisal the person determines whether the situation is a loss, threat, or challenge. Secondary appraisal refers to a set of choices and options for dealing with stressful situations, which is referred as a person's coping mechanism.

Further, Lazarus and Folkman (1984) divided coping functions into emotion-focused and problem-focused coping. Emotion-focused forms of coping are more likely occur when there has been an appraisal showing that nothing can be done to modify harmful, threatening, or challenging environmental conditions. On the other

hand, problem-focused forms of coping are more likely to occur when such conditions are appraised as amenable to change (Folkman & Lazarus, 1980, as cited in Lazarus & Folkman, 1984).

According to Roesch et al., (2005), the components of coping strategies are categorized into two groups: 1) approach-avoidance coping and 2) problem-focused and emotion-focused coping.

The first category is composed of approach and avoidance coping. The approach coping consists of the following: approach/active coping, positive expectancies/optimism, coping self-efficacy, seeking information, seeking guidance/support, self control, positive reappraisal/ reinterpretation, medical compliance, planning, logical analysis, suppression of competing activities, acceptance, and problem solving. The avoidance coping consists of avoidance/passive coping, wishful thinking, denial, behavioral disengagement, mental disengagement, self-blame, using religion, threat minimization, distancing/distraction, emotional discharge/venting feelings, alcohol/drug use, helplessness, and humor.

The second category consists of problem-focused and emotion-focused coping. The problem-focused coping covers seeking instrumental support, active coping, suppression of competing activities, medical compliance, planning, logical analysis, and problem solving. The emotional-focused coping includes positive expectancies/optimism, coping self-efficacy, seeking emotional support, self-control, positive reappraisal/reinterpretation, acceptance, threat minimization, wishful thinking, seeking other rewards, using religion, and humor.

3.3 Factors Related to Coping Strategies

Age: Patients at different ages use different coping strategies to deal with stressful events. According to Deimiling and colleagues (2006), cancer patients at older ages use lower forms of coping. This study indicated that the coping strategies which are mostly used by older adult cancer patients are planning and acceptance. On the other hand, younger cancer patients use social support, belief in recovery and getting back to normal life (Kyngas et al., 2000).

Education level: A high level of education may enhance coping through the ability to understand the situation and use information more effectively (Ben-Zur, Gilbar, & Lev, 2001). Moreover, patients with high levels of education used less emotion-focused coping strategies (Ben-Zur et al., 2001).

Culture: This is the beliefs, values, behavior and material objects that constitute a people's way of life. Culture is one factor that is related to illness perception and coping strategies (Lazarus & Folkman, 1984), so cultural issues may be a factor as well.

Appraisal: This refers to the individual's coping process. Lazarus and Folkman (1984) explained that in primary appraisal, the person determines the situation. The secondary appraisal refers to a review of the choices of action to deal with the stimuli.

Time of diagnosis: It refers to how long the patients have known they have got cancer. As the duration of the stressful event is a situational factor which influences appraisal of coping strategies (Lazarus & Folkman, 1984), then the time since diagnosis is a factor as well.

Individual characteristics: Individual differences of characteristics or personality cause different reactions to the stressful event. An optimistic person may evaluate the stressor less severe than a pessimistic person. This can influence how coping strategies are used to deal with the stressful event. One study supported that optimism and pessimism were associated with coping responses (David, Montgomery, & Bovbjerg, 2006).

3.4 Measurement of Coping Strategies

In this study, the researcher considered the use of two measures or instruments to describe the coping strategies used by patients with prostate cancer and their spouses. The first instrument was the Jalowiec Coping Scale (JCS) (Jalowiec, Murphy, & Power, 1984). The instruments consisted of 40 coping behaviors culled from a comprehensive literature review which are rated on a 1- to 5-point scale to indicate the degree of use. Twenty judges classified the items to permit analysis of the coping behaviors in accord with a problem-oriented or affective-oriented perspective; 15 problem and 25 affective items resulted. This instrument assesses either general coping behavior or situation-specific coping. An evaluation of stability using a two-week re-test interval yielded significant rhos of .79 for the total coping scores, .85 for problem-oriented, and .86 for affective-oriented. With a one-month interval coefficients the scores were .78, .84, and .83, respectively. An Alpha reliability coefficient of .86 and .85 supported the homogeneity of the instrument. Content validity can be substantiated by the systematic development of the tool, by the large number of items used, and by the inclusion of diverse coping behaviors. However, the JCS focuses on situation-specific coping behavior. Therefore, it was not appropriate for use in present study.

The second instrument considered was the COPE inventory (Carver, Scheier & Weintraub, 1989). Carver et al. (1989) developed a multidimensional coping inventory (the COPE) to assess the different ways in which people respond to stress. Five scales (of four items each) measure conceptually distinct aspects of problem-focused coping. These are active coping, planning, suppression of competing activities, restraint coping, and seeking of instrumental social support. Five scales measure aspects of what might be viewed as emotion-focused coping. These are seeking emotional social support, positive reinterpretation, acceptance, denial, and turning to religion. Three scales measure the following coping responses that arguably are less useful. There are focus on venting of emotions, behavioral disengagement, and mental disengagement. In 1997, Carver created a shorter version of the COPE which is called the Brief COPE. It was created because the earlier patient samples used became impatient when responding to the full instrument. This was because both the length and redundancy of the full instrument and the overall time taken by the assessment protocol was burdensome. The Brief COPE is a 28-item tool that measures 14 conceptually differentiable coping reactions. The alpha coefficients of the Brief COPE for each of the coping strategies ranged from .50 to .90.

Therefore the Brief COPE was used in the present study to assess coping strategies in prostate cancer patients and their spouses. This was because its reliability and validity were promising and, moreover, it was less burdensome in terms of time and making responses.

3.5 Coping Strategies of Prostate Cancer Patients and Their Spouses

There are some studies on coping strategies used by patients with prostate cancer but only a few studies focus on the coping strategies used by spouses

of the patients. Roesch and colleagues, (2005) conducted a meta-analytic review of the relationship between coping strategies, psychological adjustment, and physical adjustment in patients with prostate cancer. The results from 33 studies (n = 3,133 males with prostate cancer) indicated that prostate cancer patients use all avoidance approaches, problem-focused, and emotional-focused coping to deal with the illness. However, the findings of this study suggest that active approaches are useful to cope with prostate cancer.

In addition, a study from Deiming and colleagues, (2006) identified several coping strategies which are used by prostate cancer patients. This study aimed at finding out the coping behavior of older adults who were long-term cancer survivors. The proportion of the total sample of survivor with prostate cancer was approximately 29% of the sample (N = 321). The finding indicated that the coping used mostly by long-term survivors were planning, and acceptance; the least used coping strategies were venting their feelings and denial. The use of planning, venting emotions and social support as coping strategies decrease with age. Higher levels of positive thinking were related to the use of planning and social support. The cancer patients who had a higher number of the current symptoms of cancer were found most likely to use venting feelings and social support as coping strategies. Finally, the patients who had a greater number of symptoms during treatment were more likely to use planning, venting feelings and social support to cope. In addition, forms of coping were associated with anxiety, depression and cancer-related worries.

Yoshimoto and colleagues, (2006) conducted a study with 101 prostate cancer patients and their wives about how they used religion and problem-solving coping to help them face prostate cancer. The findings suggested that turning to

religion as a source of coping by sharing couples is associated with improved problem-solving. When wives only use religion to cope this is poorer than problem-solving.

4. Emotional Distress

4.1 Definitions of Emotional Distress

Emotional distress is depression and anxiety. These generate a negative effect on one's ability to recuperate, on one's quality of life and on the prognosis of the disease (Hann, 1999 cited by Iwamitsu et al., 2003).

Emotional distress is defined as a multi-factorial unpleasant emotional experience of a psychological (cognitive, behavioral, emotional), social, and/or spiritual nature. It may interfere with the ability to cope effectively with cancer, its physical symptoms, and its treatment (ACS, 2005).

4.2 Impacts of Emotional Distress

According to Nerenz, Leventhal, and Love (1982), there are two mechanisms that create high emotional distress. 1) The disappearance of palpable signs of disease leaves the patient in a condition of uncertainty. 2) A factor that underlies the development of emotional distress, following a rapid response to disease, is the tendency of patients to view themselves as cured once palpable symptoms of disease have disappeared. In addition, emotional distress was strongly associated with the likelihood of vague, long term side effect such as tiredness or weakness. If patients cannot deal with acute distress, they can develop long-term emotional distress. The prospect of long-term emotional distress is an important factor

in a patient's decision to stop treatment or reduce dosages. Furthermore, cancer patients suffering from emotional distress in term of depressive symptoms can interfere with cancer treatment. This may be done by increasing the length of hospital stays, a reduced ability to care for themselves, an impairment of their quality of life, and reducing treatment thereby reducing the survival rate (Madden, 2006; McDaniel et al., 1995 cited in Ahlberg et al., 2004).

4.3 Factors Related to Emotional Distress

There are several factors related to emotional distress in patients with cancer and their spouses.

Gender: This is identification of whether the patient is male or female. Gender is one of the factors of distress. Northouse and colleagues (2000) studied emotional distress in couples with colon cancer found that female patients have more emotional distress and role problems than males. Female patients with cancer may receive supports only from their sisters and daughters, but not always from their husbands, whereas male patients usually receive support from their wives and daughters (Uchitomi et al., 2000).

Time of diagnosis: This refers to how long the patients have known they have got cancer. The first reception of a diagnosis of cancer may evoke many possible emotional reactions: shock, fear and anxiety, sadness and despair, anger, guilt or shame, relief, a sense of challenge, or acceptance (Barraclough, 1999). The time of diagnosis is described as the most distressing (Edgar, Ladislav, & Liliane, 1997).

Perception: This is a patient's opinion regarding his/her cancer. Cancer patients usually perceive cancer as a life-threatening or a terrible disease which is

related to death (Akechi et al., 1999; Junda, 2004). As the patients perceive cancer as a life-threatening, a terrible or a serious disease that cannot be cured, they suffer more than others with less threatening diseases. Furthermore, when the patients perceive that they can only survive with their cancer for a shorter time, they feel more distressed (Madden, 2006).

Physiologic perspectives: This may be defined as concerning body functions, such as the symptoms and stage of the cancer. The patients at the later stages of cancer, or who experience more physical symptoms, or more negative side effects of cancer and its treatment, have high levels of distress (Ahlberg, Ekman, Wallgren, & Johansson, 2004; Ahlberg, Ekman, & Johansson, 2005). Males with prostate cancer are mostly at risk from depressive symptoms, including those with advanced disease, or those experiencing cancer symptoms and its side effects through treatment (Bennett & Badger, 2005).

Psychology: This is related to the way patients' minds work and the way their minds affect their behaviors. Patients with a history of psychiatric problems are at higher risk in terms of distress, such as the patients who are overly anxious or have low ego strength (Madden, 2006).

Past experience: This refers to an activity or something which the patient has performed. It includes situations that have occurred, actions which have been done, and the results of the action. Patients who have had difficulty in coping with problems or stressors in the past may get distressed more easily (Madden, 2006). Similarly, males with prostate cancer who had a history of clinical depression are also at risk to depression (Bennett & Badger, 2005).

Coping strategies: These are the specific efforts, both behavioral and psychological, that the patients employ to master, tolerate, reduce, or minimize stressful events (John, & Catherine, 1999). Patients who use effective coping strategies have less emotional distress.

Socioeconomic status: This may be defined as a combination of an individual's or family's economic and social position, based on income, education, and occupation. Low socioeconomic status brings about greater risk of distress. Patients with marital problems, life stressors, lack of family or social support, and financial difficulties, experience more stressors (Madden, 2006; Northouse et al., 2000).

In conclusion, the emotional distress of prostate cancer patients and their spouses can be influenced by many factors. These include gender, time of diagnosis, perceptions about cancer, physiologic perspectives, psychology, past experience, coping strategies, and socioeconomic status.

4.4 Measurement of Emotional Distress

Many instruments are used to describe the levels of emotional distress as subscales in psychological distress. However, most of those instruments focus partly on of emotional distress, like the Center for Epidemiologic Studies Depression Scale (CES-D Scale) (Radloff, 1977). The CES-D Scale short self-report scale was designed to measure current levels of depressive symptomatology, with emphasis on the affective component, the depressed mood. The CES-D Scale consists of a 20-item self-report scale that taps into depressive symptoms during a specific period (such as the past week). The scale has high internal consistency, acceptable test-retest stability, excellent concurrent validity of clinical and self-report criteria, and

substantial evidence of construct validity. The scale is a valuable tool for identifying such high-risk groups and to study the relationships between depressive symptoms and many other variables. A high average score in this instrument may be interpreted to be that the patient is at risk of depression or in need of treatment. However, the instrument measures only depression and does not include anxiety. It is, therefore, not appropriate for measuring emotional distress.

The Brief Symptom Inventory (BSI) is a 53-item questionnaire used to measure psychological distress (Derogatis & Spencer, 1982 cited by Zabora et al., 2001). The BSI contains of nine subscales. These deal with somatization, hostility, anxiety, depression, phobic anxiety, interpersonal sensitivity, the obsession-compulsion, paranoid ideation, and psychoticism. Each item is rated on a 5-point scale from 0 (not at all) to 4 (always). The respondent is asked to rate each item in terms of “How they have been feeling during the past 7 days”. This instrument has been used to measure cancer patients’ emotional distress but only anxiety and depression subscales were chosen to measure this emotional distress (Osowiecki & Compas, 1998). Even though, this instrument covers both symptoms of psychological and physical distress, only two subscales are well-established in terms of reflecting psychological distress. Thus, the BSI instrument was not appropriate for determining emotional distress in the present study.

The Profile of Mood State (POMS) is an instrument which was developed by McNair, Lorr, and Droppleman in 1971 (McNair & Heuchert, 2008) to describe subjective data relating to feeling, affect, and mood; these were specific to the emotional distress dealt with in this present study. The brief POMS (POMS-B) was developed in 1989 and was based on the need for a form that was easier to

complete. The POMS-B consists of 30 items and uses the same six subscales as measured by the longer form. Using the POMS-B gave the researcher the opportunity to reduce the time involved. Therefore, the POMS-B was deemed most appropriate for this study to describe the emotional distress of patients with prostate cancer and their spouses.

Thus, in the present study the researcher used the POMS-B as an instrument to describe the emotional distress in prostate cancer patients and their spouses. Furthermore, the reliability and validity of the instrument have been demonstrated with a variety of populations, including cancer patients (McNair & Heuchert, 2008). The POMS-B also has been used in previous studies with Thai cancer patients and showed adequate reliability and validity (Kritpracha, 2004; Petpichetchian, 2001).

4.5 Emotional Distress of Prostate Cancer Patients and Their Spouses

Prostate cancer and its treatment affects the patients' physiology and also affects both the patients and their spouses' psychological states, causing emotional distress among both. The emotional distress relationship between couples facing prostate cancer was described by Northouse et al., (2007). The experiences of emotional distress by such couples are affected more by the trajectory phase, and then by status, whether they are patients or spouses. Thus patients and spouses are both similarly affected by the illness. Patients with an advanced stage of cancer and their spouses feel higher distress than do newly diagnosed patients or those with biochemical recurrence. Moreover, the patients in an advanced stage have the lowest physical quality of life, and their spouses have the lowest emotional quality of life, compared with those in other stages.

5. Relationship Between Coping Strategies and Emotional Distress of Prostate Cancer Patients and Their Spouses

Spouses of patients with cancer experience responses related to their loved one's illness (Riechers, 2004). Prostate cancer and the side effects of treatments affect not only the patients but also their spouses. Female spouses of patients with colon cancer are especially vulnerable to the negative effect of the illness (Northouse et al., 2000). They report more distress, more role problems, and less marital satisfaction than other patients. A study by Jenewein and colleagues (2007) was conducted on males treated for oral cancer and their female partners. The results showed the wives reported more psychological distress in couples with higher discrepant ratings of marital satisfaction.

Harden and colleagues (2002) studied 22 prostate cancer patients and 20 spouses-caregivers to explore the experiences of couples living with prostate cancer. The finding of the focus groups indicated that spouses of prostate cancer patients played an active role in their husbands' illness, as they were their husbands' primary source of support. Moreover, the spouses were also affected by the patients' illness and symptoms, especially the symptoms related to urinary, sexual, and hormonal changes. Even though these symptoms were the patients' symptoms, in reality, these symptoms were also experienced by the couples.

In 2008 Harden and colleagues (2008) investigated 69 prostate cancer patients and their spouses and they found the same finding as previous studies. Spouses in middle age (50-64 years) experienced most distress related to their husbands' sexual problems. Moreover, the spouses in the middle age and old-old

group (75-84 years) have significantly more problems with the symptoms experienced by their husbands related to hormone therapy, than the young-old group (65-74 years).

Another study also confirmed a relationship between patients with prostate cancer and their spouses' individual stress responses (intrusive thoughts and avoidance) and symptoms of anxiety and depression (Ey, Compas, Epping-Jordan, & Worsham, 1998). Marital partners' symptoms of anxiety or depression were positively correlated with each other's symptoms. Avoidance by patients' is positively correlated with the anxiety or depression felt by their spouses. Furthermore, a patients' avoidance uniquely predicts greater distress in their spouse.

Some studies suggested that there is a relationship between coping and anxiety-depression, or distress, or psychological distress. Deimling and colleagues (2006) indicated a relationship between the coping behavior and level of depression and anxiety in older long-term cancer survivors, including prostate cancer survivors. The survivors who venting their feelings or denial have higher levels of anxiety, depression and cancer-related health worries.

Banthia and colleagues (2003) examined the relationship between coping and distress in couples faced with prostate cancer. This study also considered their functioning as couples as a third variable that potentially moderated or mediated the relationship. The subjects in this study were 154 patients with prostate cancer and their spouse/partner. The finding of this study showed that the relationship between coping and distress depends on the quality of how they functioned as couples. The patients that had bonded strongly as couples reported less distress than those in more dysfunctional relationships.

Roesch and colleagues (2005) used a meta-analytic review to explore the relationship between coping strategies and psychological and physical adjustment in patients with prostate cancer. Patients with prostate cancer who used a problem-focused approach and emotion-focused coping felt healthier both psychologically and physically. On the other hand, the patients who used avoidance as a coping strategy heightened negative psychological adjustment and poor physical health.

Furthermore, the problem-solving coping of spouses of patients with prostate cancer is associated with patients' coping. Yoshimoto and colleagues (2006) considered the use of religion in coping. Spouses of patients who use religious coping along with the patient show a significantly greater reduction in dysfunctional problem-solving compared with the spouses who used religious coping without the patients.

In summary, patients with prostate cancer suffer from symptoms of the cancer and the side effects of its treatment. Those symptoms and the side effects affect not only the patients, but also their spouses and this can generate stress for couples. Both patients with prostate cancer and their spouses try to minimize the stress by using several coping strategies. These coping strategies may affect their emotional distress. In addition, the coping strategies and emotional distress of the patients themselves and their spouses may affect each other in coping. They experience mutual emotional distress. Most previous studies have emphasized the impact of prostate cancer treatment on the patients or focused on the experiences of couples facing prostate cancer. There are few studies on coping strategies or emotional distress in couples facing prostate cancer. Some studies have examined the relationship between the coping strategies and emotional distress of patients with

prostate cancer and their spouses. However, the results of these Western studies cannot be generalized for different cultures as Western and Eastern countries have different characteristics. Therefore, the present study focused on the relationship between coping strategies and emotional distress of prostate cancer patients and their spouses.

CHAPTER 3

RESEARCH METHOD

This chapter describes the research method that was used to conduct the study. The following sections are included research design, population and setting, sample and sampling, instruments for measuring the study variables, data collection, protection of rights of the human subjects, and data analysis.

Research Design

A descriptive correlational research design was used. The purposes of this study were 1) to identify coping strategies and emotional distress of prostate cancer patients and their spouses, and 2) to examine the relationships between coping strategies and the emotional distress of prostate cancer patients and their spouses.

Population and Setting

The target population in this study consisted of patients diagnosed with prostate cancer in any stages and their spouses, who attend service at outpatient urology clinics, male-surgical in-patient departments, and a special in-patient department at two regional government hospitals. The first hospital (A) is a 1000-bed tertiary hospital. The second hospital (B) is 700-bed tertiary hospital. These hospitals are located in two provinces in southern Thailand.

Samples and Sampling

In the present study, the criteria used for the recruitment of forty prostate cancer patients were as follows: (1) to have been diagnosed with prostate cancer at any stage, (2) to know the diagnosis, (3) to be able to communicate in the Thai language, and (4) and to be fully conscious. The criteria for the recruitment of their spouses were as follows: (1) to live with the patients, (2) to be able to communicate in the Thai language, and (3) to be fully conscious.

The researcher did not use power analysis to estimate sample size because of the limited number of prostate cancer patients in southern Thailand. Only 128 and 80 prostate cancer patients attended for treatment at the hospitals A and B respectively over one year (October 1, 2007 - September 30, 2008). However, these hospitals are some of the largest hospitals in southern Thailand. Moreover, some of the patients were lost in the follow-up. According to the registration unit there were only 59 prostate cancer patients who continued to attend continuously for treatment at the hospital A (January 4, 2009).

The data collection took place over a four months period (January 4, 2009 - April 29, 2009). In the hospital A, there were 48 prostate cancer patients who were attending for treatment. Twenty-five patients and their spouses in the hospital A participated in this study. In hospital B, there were 34 prostate cancer patients who were attending for treatment. Fifteen patients and their spouses in hospital B participated in this study. To conclude, 40 prostate cancer patients and their spouses participated in this study.

Instruments

The instruments which were used for data collection consisted of three parts: 1) a demographic characteristic form for prostate cancer patients and for their spouses, 2) the Brief COPE, and 3) the Profile of Mood States-Brief.

1) Demographic Characteristic Form for Prostate Cancer Patients and for Their Spouses

1.1 The demographic characteristic form for prostate cancer patients was created by the researcher. It consisted of the name of the department and hospital. The following details of each patient were collected: age, religion, educational level, number of children, occupation, family income, insurance status, length of time since the diagnosis, stage of prostate cancer, treatment, and perception of the severity of the prostate cancer.

1.2 The demographic characteristic form for the spouses was created by the researcher. The following details of each spouse were collected: age, religion, education level, occupation, and perception of the severity of the prostate cancer.

2) The Brief COPE

The Brief COPE (Carver, 1997) was used to measure coping strategies of prostate cancer patients and their spouses. The COPE inventory (Carver et al., 1989) was developed to assess a broad range of coping responses, several of which had explicit bases in theory. The abbreviated version of the COPE inventory was used, as it was created to reduce the time taken and the burden in responding to items. Many studies have used the Brief COPE to measure coping strategies of patients with

cancer. The Brief COPE assessments consists of 28 items that measure 14 conceptually differentiable coping reactions, each made up of two items: self-distraction (items 1 and 19), active coping (items 2 and 7), denial (items 3 and 8), substance use (items 4 and 11), use of emotional support (items 5 and 15), behavioral disengagement (items 6 and 16), venting (items 9 and 21), use of instrumental support (items 10 and 23), positive reframing (items 12 and 17), self-blame (items 13 and 26), planning (items 14 and 25), humor (items 18 and 28), acceptance (items 20 and 24), and religion (items 22 and 27). The respondent rated each item on a 4 point scale ranging from: 1 (I haven't been doing this at all.) to 4 (I've been doing this a lot.). The scores for each coping strategies were calculated by summing up the scores on the respective two items with no reversals of coding. The higher scores indicate the coping strategies used more often by the subjects.

The Brief COPE shows adequate reliability and validity (Carver, 1997). The alpha coefficients for each coping strategies range from .50 to .90. The Brief COPE was translated into Thai and used to conduct a study in cancer patients by Kritpracha (2004). The reliability of internal consistency of the Brief COPE used in that study was .72 for the entire scale. In the present study the reliability of internal consistency was .74 and .61 for the entire scale in prostate cancer patients ($n = 40$) and their spouses ($n = 40$) respectively. The researcher obtained permission, via e-mail, to use the Brief COPE from Charles S. Carver who developed the instrument.

3) The Profile of Mood States-Brief

The emotional distress was measured by the Profile of Mood States-Brief (POMS-B) (McNair & Heuchert, 2008). The POMS was developed to measure mood stages in psychiatric outpatients and as a method for assessing changes in such

patients. Many studies have used the POMS to measure mood disturbance caused by the physical and psychological effects of cancer. The brief version of the POMS was developed to facilitate its use for patients under stress, in pain, or elderly. The POMS-B contains 30 items, with five items for each of the same six factors as measured by the long version.

The POMS-B assessments measure six identified mood factors: Tension-Anxiety, Anger-Hostility, Fatigue-Inertia, Confusion-Bewilderment, Depression-Dejection, and Vigor-Activity. The respondent rates each item on a 5-point scale ranging from “not at all” to “extremely”. After reverse scoring each appropriate item, the total score is calculated by summing up the scores across six subscales with vigor-activity weighted negatively. The possible total score is -20 to 80. A total score that is minus means that the Vigor-Activity score is higher than the sum of the other mood factor scores. As the total scores can be both positive or minus scores, the standard deviations of the total score can be higher than the mean scores. The higher scores indicate greater mood disturbance. Greater mood disturbance indicates higher emotional distress.

The POMS-B has shown adequate reliability and validity. The alpha coefficients ranged from .81 to .93 and .76 to .92 for a psychiatric outpatient sample in males and females, respectively (McNair & Heuchert, 2008). The POMS-B was used to conduct the studies in cancer patients in Thailand by Petpichetchain (2001) and Kritpracha (2004) and the internal consistency was affirmed. The reliability of internal consistency of the POMS-B in the present study was .80 in both prostate cancer patients ($n = 40$) and their spouses ($n = 40$). The alpha coefficients of each subscale in prostate cancer patients were .48, .77, .85, .43, .61, and .36 for Tension-

Anxiety, Anger-Hostility, Fatigue-Inertia, Confusion-Bewilderment, Depression-Dejection, and Vigor-Activity respectively. In the spouses, the alpha coefficients were .81, .40, .80, .69, .58, and .42 for Tension-Anxiety, Anger-Hostility, Fatigue-Inertia, Confusion-Bewilderment, Depression-Dejection, and Vigor-Activity respectively.

The POMS-B has been copyrighted by Maurice Lorr, Douglas M. McNair, and JW P. Heuchert, under exclusive license to Multi-Health Systems Inc. For using the instrument, the researcher received permission to reformat the POMS-B and to use it for this study.

Translation and Validity

The original Brief COPE and the POMS-B instruments were developed in the English language. The Brief COPE instrument was translated into the Thai language using the de-centering and back translation technique used by Kritpracha (2004). The English version of POMS-B instrument is now available in many languages, including the Thai language.

In this study, three experts from the Prince of Songkla University evaluated the following: the demographic characteristic forms for prostate cancer patients and for their spouses, the Brief COPE, and the POMS-B instruments. The instruments were used after all experts agreed that the three instruments were appropriate for this study.

Data Collection

The processes of data collection were as follows:

1) The researcher obtained permission to conduct the study from the directors of the two hospitals. The researcher went to each setting to explain and give information about the study to the head nurses at each of the departments mentioned.

2) The researcher asked registered nurses at each department of the hospitals to identify patients and their spouses who met the inclusion criteria. They gave the patients a description of the study, and obtained their verbal consent to take part in it.

3) The researcher contacted the participants, introduced herself and gave out and explained information concerning the study. After receiving the explanations, the subjects were asked to sign an informed consent form. Verbal consent was also accepted. However, the participants were informed that they were free to withdraw at any time without any penalty or outcome.

4) The researcher explained the sequence of questionnaires to ensure that they had understood the questions.

5) The researcher allowed time for the subjects to answer all the questions; the researcher clarified the questions, if necessary. The questions were completed in about 30 minutes.

6) During the process, the researcher asked for permission from the patients to contact their spouses when they were not with them at the hospital.

6.1 From January 4, 2009 to February 16, 2009 the researcher contacted spouses via phone. When they agreed to participate in the study, the

researcher went to an agreed meeting place and asked them to answer the questionnaires.

6.2 From February 17, 2009 to April 29, 2009 the researcher contacted spouses via the phone. When they agreed to participate in the study, the researcher went to an agreed meeting place and asked them to answer the questionnaires. During this last period of study, the researcher collected data in two hospitals. The following constraints were then encountered: costs, shortage of time, and increased travelling distances. As a result the researcher asked some of the spouses ($n = 12$) to participate in the research via the phone.

7) The subjects were free to answer the questionnaires. The researcher checked whether the questionnaires were complete, and asked the subjects to complete them as necessary.

8) The researcher coded the questionnaires to assure the anonymity of the subjects.

9) Finally, the researcher scored the responses, and transcribed and compiled them for data analysis.

Protection of Subjects' Rights

Permission for data collection was obtained from the Ethical Committee of the Faculty of Nursing, Prince of Songkla University, and from the Directors and the Ethical Committees of the two hospitals where this study took place. The subjects were informed of the protection of their human rights in the consent form. The researcher clearly provided and explained the information about the study, such as the objectives, data collection, and outcomes. The participants acted

voluntarily and the subjects could withdraw at any time without giving a reason. This study did not affect the care they were receiving from any health care setting. Although this study intended no harm to participants, it might have increased their negative emotions such as sadness, anxiety, and worry about their illness. However, during data collection process, there was no participant had negative emotions. All of information was kept confidential and the researcher destroyed it after finishing the research process. The information gathered was used to write overview of the research report.

Data Analysis

The data was analyzed using a computer program. Descriptive statistics, namely means, percentages, frequencies, standard deviations, and ranges were used to describe the demographic characteristics of the prostate cancer patients and their spouses such as age, religion, education level, and occupation. The data collected were used to describe the coping strategies and emotional distress of the patients and their spouses.

Preliminary testing was done to meet the assumptions of correlational analysis which are used to test for normality and linearity, prior to running the parametric test (see Appendix A). Pearson's product moment correlation coefficient (r) was used to test the hypotheses and to examine the relationship between coping strategies and emotional distress of prostate cancer patients and their spouses.

CHAPTER 4

RESULTS AND DISCUSSION

This descriptive study was designed to determine coping strategies and emotional distress, and examine the relationships between the coping strategies and emotional distress of prostate cancer patients and their spouses. In this chapter the following are considered: demographic characteristics of the patients and their spouses, coping strategies, emotional distress, and the relationships between coping strategies and emotional distress of prostate cancer patients and their spouses. The chapter concludes with a discussion of the findings.

Results

1. Participants' Demographic Characteristics

For this study, 40 prostate cancer patients and their spouses ($N = 80$) from two government hospitals in southern of Thailand were recruited. There were more participants from the hospital A ($n = 50, 62.5\%$) as compared to the hospital B ($n = 30, 37.5\%$).

The demographic characteristics of the participants are presented in Table 1 and Table 2. The mean age of the patients was 70.35 years ($SD = 8.81$), ranging from 53 to 86 years, and the mean spouses' age was 65.40 years ($SD = 10.43$), ranging from 42 to 83 years. The majority of the patients and spouses were Buddhists (92.5%) and the others were Muslim. Most of the patients and spouses had primary school level education (70% and 72%, respectively). The patients and

spouses' number of children ranged from 0 to 11 children. The number of family members of the patients and their spouses ranged from 2 to 8 persons. The length of their married life was 8 to 61 years ($M = 42.85$, $SD = 12.2$). Forty-five percent of both patients and spouses were unemployed, and had no family income from working (42.5%). However, most of the patients had an adequate income (72.5%).

All patients did not pay for the cost of cancer treatment. Fifty percent of the patients had insurance that provided universal coverage (the 30 baht program insurance), and the others had been reimbursed (45%) from government or state enterprises, or elderly welfare (5%). The patients knew the diagnosis of prostate cancer for 1 to 2 years (27.5%), 1 to 6 months (20%), and 2 to 3 years (15%) respectively. Only fifteen percent of the patients had metastasis cancer and most (66.7%) suffered bone metastasis and urinary bladder metastasis (33.3%). Their main previous treatment was hormonal therapy (40%) followed by surgery with hormonal therapy (25%). Most of the present treatment was hormonal therapy (62.5%). Some patients had no any present treatment as their cancer was under control (12.5%).

Table 1

Demographic Characteristics of the Patients (n = 40)

| Characteristics | <i>n</i> | % |
|---|----------|------|
| 1. Age (years) M = 70.35, SD = 8.81, Min-max = 53 - 86 | | |
| 2. Religion | | |
| Buddhism | 37 | 92.5 |
| Islam | 3 | 7.5 |
| 3. Education level | | |
| None | 1 | 2.5 |
| Primary school | 28 | 70 |
| Junior high school | 2 | 5 |
| Senior high school | 6 | 15 |
| Diploma | 1 | 2.5 |
| Graduate | 2 | 5 |

Table 1 (Continued)

| Characteristics | <i>n</i> | % |
|--|----------|------|
| 4. Number of children (person) M = 4.32, SD = 2.3, Min-max = 0 - 11 | | |
| 5. Number of members in family (persons) M = 3.58, SD = 1.57, Min-max = 2 - 8 | | |
| 6. Occupation | | |
| Unemployed | 18 | 45 |
| Farmer | 10 | 25 |
| Government employee | 1 | 2.5 |
| Private company | 1 | 2.5 |
| Business/seller | 5 | 12.5 |
| Retired government worker | 5 | 12.5 |
| 7. Family Working Income per month (baht) | | |
| None | 17 | 42.5 |
| ≤ 5,000 | 3 | 7.5 |
| 5,001 - 10,000 | 12 | 30 |
| 10,001 - 15,000 | 3 | 7.5 |
| 15,001 – 20,000 | 0 | 0 |
| > 20,000 | 5 | 12.5 |
| 8. Income status | | |
| More than adequate | 2 | 5 |
| Adequate | 29 | 72.5 |
| Inadequate | 3 | 7.5 |
| Inadequate and debts | 6 | 15 |
| 9. Insurance status | | |
| Universal coverage (30 baths program insurance) | 20 | 50 |
| Reimbursed from government or state enterprises | 18 | 45 |
| Elderly welfare | 2 | 5 |
| 10. Time since diagnosis | | |
| within 1 months | 4 | 10 |
| 1 - 6 months | 8 | 20 |
| 6 - 12 months | 5 | 12.5 |
| 1 - 2 years | 11 | 27.5 |
| 2 - 3 years | 6 | 15 |
| 3 - 4 years | 3 | 7.5 |
| 4 - 5 years | 2 | 5 |
| 5 - 6 years | 0 | 0 |
| 6 - 7 years | 1 | 2.5 |
| 11. Previous treatment | | |
| Surgery | 2 | 5 |
| Hormonal therapy | 16 | 40 |
| Surgery and Radiation therapy | 1 | 2.5 |
| Surgery and Hormonal therapy | 10 | 25 |
| Hormonal therapy and Chemotherapy | 5 | 12.5 |
| Surgery, Radiation and Hormonal therapy | 1 | 2.5 |

Table 1 (Continued)

| Characteristics | <i>n</i> | % |
|--|----------|------|
| 11. Previous treatment (Continued) | | |
| Surgery, Hormonal therapy and Chemotherapy | 2 | 5 |
| No treatment (newly diagnosed) | 3 | 7.5 |
| 12. Present treatment | | |
| Hormonal therapy | 25 | 62.5 |
| Chemotherapy | 1 | 2.5 |
| Surgery and Hormonal therapy | 3 | 7.5 |
| Hormonal therapy and Chemotherapy | 6 | 15 |
| No medication treatment | 5 | 12.5 |
| 13. Perception of prostate cancer severity score | | |
| M = 4.28, SD = 3.19, min - max = 0 - 10 | | |
| 14. Staging of cancer | | |
| Metastasis | 6 | 15 |
| Non-metastasis | 34 | 85 |
| 15. Organ of cancer metastasis | | |
| Bone | 4 | 66.7 |
| Urinary bladder | 2 | 33.3 |

Table 2

Demographic Characteristics of the Spouses (n = 40)

| Characteristics | <i>n</i> | % |
|---|----------|------|
| 1. Age (years) | | |
| M = 65.40, SD = 10.43, Min-max = 42 - 83 | | |
| 2. Religion | | |
| Buddhism | 37 | 92.5 |
| Islam | 3 | 7.5 |
| 3. Education level | | |
| None | 5 | 12.5 |
| Primary school | 29 | 72.5 |
| Junior high school | 2 | 5 |
| Senior high school | 2 | 5 |
| Diploma | 1 | 2.5 |
| Graduate | 1 | 2.5 |
| 4. Occupation | | |
| Unemployed | 18 | 45 |
| Farmer | 14 | 35 |
| Government official/ State Enterprises official | 1 | 2.5 |
| Business/seller | 6 | 15 |
| Other | 1 | 2.5 |

Table 2 (Continued)

| Characteristics | <i>n</i> | % |
|--|----------|---|
| 5. Length of marriage (years) M = 42.85, SD = 12.30, Min-max = 8 - 61 | | |
| 6. Perception of prostate cancer severity score M = 6.05, SD = 2.83, Min-max = 0 - 10 | | |

The spouses who participated in this study perceived the severity of prostate cancer slightly higher as compared to the patients. The spouses' severity score was an average of 6.05 (min-max = 0 - 10, *SD* = 2.83) while the patients' was an average of 4.28 (min-max 0 - 10, *SD* = 3.19).

2. Coping Strategies

The Brief COPE (Carver, 1997) was used to assess the coping strategies of the participants. The Brief COPE is composed of 14 different coping strategies: self-distraction, active coping; denial, substance use, use of emotional support, behavioral disengagement, venting; use of instrumental support, positive reframing, self-blame; planning, humor, acceptance, and religion. The possible scores for each coping strategy ranged from 2 to 8. The higher scores indicated that coping strategies were used more often by the participants. Means and standard deviations of the Brief COPE subscales are provided in Table 3.

The results show that six of the top ranked coping strategies used by patients and spouses were the same, but with different rankings. The use of emotional support, acceptance, and active coping were the most often used coping strategies used by the patients. Behavioral disengagement, self-blame, and substance use were the three least used by the patients. Active coping, use of emotional support, and

acceptance were most often used by the spouses. Humor, substance use, and self-blame were the three least used by the spouses.

Table 3

Mean and Standard Deviations of the Brief COPE Subscale (N = 80)

| Coping strategies | Patients (<i>n</i> = 40) | | Spouses (<i>n</i> = 40) | |
|-----------------------------|---------------------------|-----------|--------------------------|-----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Use of emotional support | 6.98 | 1.48 | 6.93 | 0.97 |
| Acceptance | 6.70 | 1.36 | 6.88 | 1.24 |
| Active coping | 6.53 | 1.13 | 7.05 | 1.21 |
| Positive reframing | 5.30 | 1.92 | 6.65 | 1.23 |
| Religion | 4.77 | 2.37 | 5.95 | 1.92 |
| Use of instrumental support | 4.62 | 1.88 | 4.58 | 2.30 |
| Denial | 4.37 | 1.86 | 2.98 | 1.53 |
| Planning | 4.32 | 1.81 | 4.40 | 1.78 |
| Self-distraction | 4.28 | 1.84 | 4.35 | 1.76 |
| Venting | 3.95 | 1.58 | 4.30 | 1.64 |
| Humor | 3.10 | 1.48 | 2.85 | 1.10 |
| Behavioral disengagement | 3.03 | 1.58 | 3.12 | 1.51 |
| Self-blame | 2.83 | 1.43 | 2.28 | 0.82 |
| Substance use | 2.45 | 1.13 | 2.33 | 1.05 |

3. Emotional Distress

The Thai version of the Profile of Mood State - Brief (POMS-B) (McNair & Heuchert, 2008) was used to measure emotional distress of the subjects. The POMS-B contains six subscales: Tension-Anxiety, Depression-Dejection, Anger-Hostility, Vigor-Activity, Fatigue-Inertia, and Confusion-Bewilderment. The possible score for each subscale ranged from 0 to 20. The Total

Mood Disturbance (TMD) score was obtained by summing up the score across six subscales as appropriate (weighting Vigor negatively). The higher scores (possible scores are -20 to 80) indicated a higher mood disturbance which represented higher emotional distress. Table 4 presents the means and standard deviations of The POMS-B subscales.

The results reveal that the patients' TMD scores ranged from -11 to 43, with mean scores of 6.40 ($SD = 12.45$). The mean of the spouses' TMD score was 4.45 ($SD = 13.36$) and the scores ranged from -17 to 40.

Table 4

Mean and Standard Deviations of the POMS-B Subscales and TMD Scores (N = 80)

| Mood Disturbance | Patients ($n = 40$) | | Spouses ($n = 40$) | |
|------------------------------|-----------------------|-----------|----------------------|-----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Total Mood Disturbance Score | 6.40 | 12.45 | 4.45 | 13.36 |
| Tension-Anxiety | 2.92 | 2.65 | 3.53 | 3.97 |
| Depression-Dejection | 1.80 | 2.30 | 1.90 | 2.38 |
| Anger-Hostility | 1.98 | 2.60 | 2.05 | 2.08 |
| Fatigue-Inertia | 5.38 | 4.52 | 3.60 | 3.74 |
| Confusion-Bewilderment | 3.93 | 2.75 | 3.85 | 2.79 |
| Vigor-Activity | 9.60 | 2.95 | 10.48 | 3.37 |

4. Relationship Between Coping Strategies and Emotional Distress of Prostate Cancer Patients

The Pearson's correlations coefficient between coping strategies and emotional distress of patients with prostate cancer are presented in Table 5. Overall, TMD scores show a statistically significant negative association with active coping ($r = -.36, p < .05$), and use of emotional support ($r = -.46, p < .01$). The TMD scores

show a statistically significant positive correlation between two coping strategies: substance use ($r = .38, p < .05$) and behavioral disengagement ($r = .49, p < .01$). The findings show that the more patients used active coping or use of emotional support coping strategies, the less emotional distress they had. On the other hand, the more patients used substance use or behavioral disengagement coping strategies, the more emotional distress they had.

There were statistically significant correlations between coping strategies and mood factors in prostate cancer patients. Active coping has a statistically significant negative association with Tension-Anxiety ($r = -.46, p < .01$), Anger-Hostility ($r = -.37, p < .05$), and Depression-Dejection ($r = -.57, p < .01$). Thus, the findings indicate that the more patients used active coping, the less Tension-Anxiety, Anger-Hostility, and Depression-Dejection they had.

Substance use had a statistically significant positive association with Tension-Anxiety ($r = .43, p < .01$), Fatigue-Inertia ($r = .36, p < .05$), and Depression-Dejection ($r = .36, p < .05$). Therefore, the more patients used substance use coping strategies, the greater were their Tension-Anxiety, Fatigue-Inertia, and Depression-Dejection.

The use of emotional support had a statistically significant negative association with Tension-Anxiety ($r = -.33, p < .05$), Anger-Hostility ($r = -.52, p < .01$), and Depression-Dejection ($r = -.45, p < .01$). The results suggest that the more emotional support coping strategies used by the patients, the less Tension-Anxiety, Anger-Hostility, and Depression-Dejection they had.

Table 5

Correlation of Patients' Coping Subscales and the Mood Disturbance (n = 40)

| Patients' Coping Strategies | Patients' Mood Disturbance | | | | | | |
|-----------------------------|----------------------------|----------------|----------------|----------------|----------------|----------------|------------------|
| | T ¹ | A ² | F ³ | C ⁴ | D ⁵ | V ⁶ | TMD ⁷ |
| Self-distraction | .10 | -.26 | .02 | -.25 | .06 | .26 | -.12 |
| Active coping | -.46** | -.37* | -.16 | .01 | -.57** | .10 | -.36* |
| Denial | .15 | -.04 | .23 | .27 | .25 | .21 | .17 |
| Substance use | .43** | .27 | .36* | .28 | .36* | .11 | .38* |
| Use of emotional support | -.33* | -.52** | -.31 | -.30 | -.45** | .11 | -.46** |
| Behavioral disengagement | .47** | .41** | .39* | .34* | .54** | .04 | .49** |
| Venting | .10 | .04 | .19 | -.07 | -.06 | .17 | .03 |
| Use of instrumental support | -.00 | -.02 | .25 | .05 | -.10 | .12 | .05 |
| Positive reframing | -.12 | -.20 | -.11 | -.05 | .02 | .32* | -.19 |
| Self-blame | .42** | .08 | .22 | .12 | .32* | .17 | .23 |
| Planning | .30 | .17 | .19 | .03 | .26 | .09 | .20 |
| Humor | .10 | .45** | -.09 | .06 | .15 | .09 | .10 |
| Acceptance | -.10 | -.13 | -.03 | -.22 | -.19 | .09 | -.17 |
| Religion | .01 | -.37* | .09 | -.31 | .01 | .05 | -.12 |

* $p < .05$

** $p < .01$

1 = Tension-Anxiety, 2 = Anger-Hostility, 3 = Fatigue-Inertia, 4 = Confusion-Bewilderment, 5 = Depression-Dejection, 6 = Vigor- Activity, 7 = Total mood disturbance score

Behavioral disengagement had statistically significant positive correlations with Tension-Anxiety ($r = .47, p < .01$), Anger-Hostility ($r = .41, p < .01$), Fatigue-Inertia ($r = .39, p < .05$), Confusion-Bewilderment ($r = .34, p < .05$), and Depression-Dejection ($r = .54, p < .01$). Thus the more patients used behavioral disengagement coping strategies, the greater Tension-Anxiety, Anger-Hostility, Fatigue-Inertia, Confusion-Bewilderment, and Depression-Dejection they had.

Positive reframing had a statistically significant positive association with Vigor-Activity ($r = .32, p < .05$). This indicated that the more patients used positive reframing coping strategies, the more Vigor-Activity they had.

Self-blame had statistically significant positive correlations with Tension-Anxiety ($r = .42, p < .01$), and Depression-Dejection ($r = .32, p < .05$). The results show that the more patients used self-blame, the greater their Tension-Anxiety, and Depression-Dejection.

Humor had a statistically significant positive association with Anger-Hostility ($r = .45, p < .01$). On the other hand, religion had a statistically significant negative association with Anger-Hostility ($r = -.37, p < .05$). Thus, the more patients used humor, the more they had Anger-Hostility. When they used religion coping strategies more, the less Anger-Hostility they had.

In conclusion, the results of correlation analysis between coping strategies and emotional distress in prostate cancer patients showed that when the patients used more active coping, use of emotional support, positive reframing, or religion coping strategies, they had less emotional distress, less negative mood factors, and/or higher positive mood factor. However, when the patients used more substance use, behavioral disengagement, self-blame, or humor coping strategies, they had higher emotional distress and/or some negative mood factors.

5. Relationship Between Coping Strategies and Emotional Distress of Spouses

The Pearson's correlation coefficient between coping strategies and emotional distress of the spouses are presented in Table 6. Overall, the TMD scores showed a statistically significant negative correlation with active coping ($r = -.40$,

$p < .05$) but there were statistically significant positive correlations with substance use ($r = .32, p < .05$) and behavioral disengagement ($r = .42, p < .01$). The results indicate that the more spouses used active coping, the less emotional distress they had, but the more they used substance use or behavioral disengagement, the more emotional distress they had.

In addition, the spouses' coping strategies were statistically significant with their mood factors. Active coping had statistically significant negative correlations with Fatigue-Inertia ($r = -.40$), and Confusion-Bewilderment ($r = -.33$), and all were significant at $p < .05$). The findings show that the more spouses used active coping, the less Fatigue-Inertia, and Confusion-Bewilderment they had.

Substance use had statistically significant positive associations with Tension-Anxiety ($r = .43, p < .01$), and Fatigue-Inertia ($r = .32, p < .05$). The findings indicate that the more spouses used substance use, the higher Tension-Anxiety, and Fatigue-Inertia they had.

The Use of emotional support had a statistically significant negative association with Anger-Hostility ($r = -.37, p < .05$). This indicated that the greater he use of emotional support by the spouses, the less Anger-Hostility they had.

Furthermore, behavioral disengagement had statistically significant positive associations with Tension-Anxiety ($r = .32, p < .05$), Anger-Hostility ($r = .41, p < .01$), Fatigue-Inertia ($r = .36, p < .05$), and Depression-Dejection ($r = .46, p < .01$). Hence the more spouses used behavioral disengagement coping strategies, the greater their Tension-Anxiety, Anger-Hostility, Fatigue-Inertia, and Depression-Dejection.

Table 6

Correlation of Spouses' Coping Subscales and the Mood Disturbance (n = 40)

| Spouses' Coping Strategies | Spouses' Mood Disturbance | | | | | | |
|-----------------------------|---------------------------|----------------|----------------|----------------|----------------|----------------|------------------|
| | T ¹ | A ² | F ³ | C ⁴ | D ⁵ | V ⁶ | TMD ⁷ |
| Self-distraction | -.09 | .11 | -.10 | -.02 | .08 | .28 | -.10 |
| Active coping | -.20 | -.18 | -.40* | -.33* | -.28 | .31 | -.40* |
| Denial | -.22 | -.07 | .04 | .04 | .04 | -.14 | -.02 |
| Substance use | .43** | .22 | .32* | .21 | .04 | -.06 | .32* |
| Use of emotional support | -.04 | -.37* | .04 | -.04 | -.10 | -.15 | -.05 |
| Behavioral disengagement | .32* | .41** | .36* | .19 | .46** | -.14 | .42** |
| Venting | -.13 | .17 | -.14 | .11 | .11 | -.12 | .02 |
| Use of instrumental support | -.22 | -.14 | -.29 | -.03 | .01 | -.13 | -.14 |
| Positive reframing | -.16 | -.23 | -.14 | .01 | -.12 | .05 | -.15 |
| Self-blame | .05 | .11 | -.05 | -.08 | .23 | -.11 | .07 |
| Planning | .14 | -.01 | -.08 | .06 | .23 | .02 | .07 |
| Humor | -.21 | -.01 | -.12 | -.04 | .02 | -.11 | -.07 |
| Acceptance | .11 | -.23 | .00 | .07 | -.03 | -.18 | .05 |
| Religion | .10 | .07 | .01 | -.03 | .04 | .07 | .03 |

* $p < .05$

** $p < .01$

1 = Tension-Anxiety, 2 = Anger-Hostility, 3 = Fatigue-Inertia, 4 = Confusion-Bewilderment, 5 = Depression-Dejection, 6 = Vigor- Activity, 7 = Total mood disturbance score

In conclusion, the results show the statistically significant correlations between coping strategies and emotional distress in the spouses. When they used more active coping or the use of emotional support, they had less emotional distress and/or some negative mood factors. On the other hand, when they used more substance use or behavioral disengagement, they had higher emotional distress and/or some negative mood factors.

6. Relationship Between Coping Strategies and Emotional Distress of Prostate Cancer Patients and Their Spouses

To determine the relationship between the coping strategies of the subjects, Pearson's correlation analysis was conducted. The relationship between the variables of the patients and their spouses are presented as follows:

6.1 Relationship Between the Patients' Coping Strategies and the Spouses' Emotional Distress

The results of the bivariate correlation analysis using Pearson correlation coefficients between the patients' coping strategies and the spouses' emotional distress are present in Table 7. There was a statistically significant correlation between patients' coping strategies and spouses' emotional distress. The patients' active coping had a statistically significant negative correlation with the spouses' TMD scores ($r = -.34, p < .05$), indicating that the more patients used active coping, the less emotional distress their spouses had.

The relationships between the patients' coping strategies and the spouses' mood factors were measured. There was a statistically significant positive relationship between the patients' self-distraction and the spouses' Confusion-Bewilderment ($r = .35, p < .05$). This indicated that the more patients used self-distraction, the more spouses experienced Confusion-Bewilderment. In addition, the patients' active coping had statistically significant negative correlations with the spouses' Anger-Hostility ($r = -.37, p < .05$), Confusion-Bewilderment ($r = -.44, p < .01$), and Depression-Dejection ($r = -.44, p < .01$). The results indicate that the more patients used active coping, the less spouses felt Anger-Hostility, Confusion-

Bewilderment, and Depression-Dejection. Furthermore, there was a statistically significant negative correlation between the patients' use of emotional support and the spouses' Anger-Hostility ($r = -.05, p < .01$), indicating that the more emotional support was use by the patients, the less their spouses felt Anger-Hostility

Table 7

Correlation of Patients' Coping Subscales and Spouses' Mood Disturbance (N = 80)

| Patients' Coping Strategies | Spouses' Mood Disturbance | | | | | | |
|-----------------------------|---------------------------|----------------|----------------|----------------|----------------|----------------|------------------|
| | T ¹ | A ² | F ³ | C ⁴ | D ⁵ | V ⁶ | TMD ⁷ |
| Self-distraction | .07 | -.07 | .23 | .35* | .10 | -.16 | .21 |
| Active coping | -.26 | -.37* | -.25 | -.44** | -.44** | -.16 | -.34* |
| Denial | -.09 | .11 | .02 | -.02 | .01 | .14 | -.04 |
| Substance use | .16 | .15 | .15 | .19 | .18 | -.13 | .22 |
| Use of emotional support | -.09 | -.50** | -.22 | -.26 | -.10 | -.03 | -.23 |
| Behavioral disengagement | .20 | .09 | .28 | .17 | .25 | .04 | .22 |
| Venting | .05 | -.13 | .17 | .08 | -.02 | -.06 | .07 |
| Use of instrumental support | .03 | -.19 | -.07 | -.05 | -.09 | -.08 | -.05 |
| Positive reframing | -.07 | -.16 | -.09 | -.10 | -.12 | -.19 | -.06 |
| Self-blame | -.24 | -.12 | -.10 | -.06 | .00 | .15 | -.17 |
| Planning | .18 | -.13 | .14 | .10 | .02 | .01 | .09 |
| Humor | .07 | .04 | .06 | .05 | -.05 | .02 | .04 |
| Acceptance | -.02 | -.18 | .06 | -.17 | -.07 | -.25 | -.01 |
| Religion | .21 | -.03 | .27 | .10 | .29 | -.15 | .24 |

* $p < .05$

** $p < .01$

1 = Tension-Anxiety, 2 = Anger-Hostility, 3 = Fatigue-Inertia, 4 = Confusion-Bewilderment, 5 = Depression-Dejection, 6 = Vigor- Activity, 7 = Total mood disturbance score

Therefore, when the patients used more active coping or used emotional support coping strategies, their spouses had less emotional distress and/or some negative mood factors. On the other hand, when the patients used more self-distraction coping strategies, their spouses had a higher negative mood factor.

6.2 Relationship Between the Spouses' Coping Strategies and the Patients' Emotional Distress

Table 8 presents the correlation between spouses' coping strategies and the patients' emotional distress. Overall, there was no statistically significant relationship between the spouses' coping strategies and the patients' emotional distress. However, the spouses' coping strategies had a statistically significant relationship with the patients' mood factors.

Table 8

Correlation of Spouses' Coping Subscales and Patients' Mood Disturbance (N = 80)

| Spouses' Coping Strategies | Patients' Mood Disturbance | | | | | | |
|-----------------------------|----------------------------|----------------|----------------|----------------|----------------|----------------|------------------|
| | T ¹ | A ² | F ³ | C ⁴ | D ⁵ | V ⁶ | TMD ⁷ |
| Self-distraction | .28 | .01 | .06 | .06 | .29 | -.20 | .20 |
| Active coping | .13 | -.02 | .02 | .02 | .04 | -.13 | .08 |
| Denial | .08 | -.01 | .22 | -.06 | .04 | -.09 | .11 |
| Substance use | .23 | .08 | .03 | -.03 | .10 | .09 | .07 |
| Use of emotional support | -.18 | -.08 | -.02 | -.14 | -.28 | -.05 | -.14 |
| Behavioral disengagement | .35* | .04 | .11 | -.08 | .24 | -.09 | .17 |
| Venting | .15 | .07 | .05 | .10 | .21 | -.02 | .13 |
| Use of instrumental support | -.11 | .16 | -.06 | .04 | -.12 | .07 | -.04 |
| Positive reframing | .09 | -.14 | -.08 | -.12 | -.07 | .11 | -.10 |
| Self-blame | -.14 | -.07 | -.17 | -.17 | -.22 | .19 | -.23 |
| Planning | .32* | .14 | .10 | .23 | .23 | .01 | .22 |
| Humor | -.10 | .11 | -.03 | -.04 | -.00 | .35* | -.10 |
| Acceptance | .15 | -.05 | .18 | -.01 | .14 | -.13 | .14 |
| Religion | .14 | -.02 | .06 | -.22 | .00 | -.19 | .04 |

* $p < .05$

** $p < .01$

1 = Tension-Anxiety, 2 = Anger-Hostility, 3 = Fatigue-Inertia, 4 = Confusion-Bewilderment, 5 = Depression-Dejection, 6 = Vigor- Activity, 7 = Total mood disturbance score

The spouses' behavioral disengagement had a statistically significant positive correlation with the patients' Tension-Anxiety ($r = .35, p < .05$), indicating that the more spouses used behavioral disengagement coping strategies, the patients had higher Tension-Anxiety. In addition, the spouses' planning was statistically significantly and positively associated with the patients' Tension-Anxiety ($r = .32, p < .05$). Thus the more spouses used planning coping strategies, the patients had more Tension-Anxiety. The spouses' humor also had a statistically significant positive association with the patients' Vigor-Activity ($r = .35, p < .05$). This indicated that the more spouses used humor coping strategies, the more Vigor-Activity the patients had. Thus, the findings show that when the spouses used more behavioral disengagement, planning, or humor, the patients experienced some more negative mood factors.

6.3 Relationship Between the Patients' and the Spouses' Emotional Distress

The correlations between the patients' and the spouses' emotional distress are presented in Table 9. Even though there was no statistically significant relationship between the patients' and their spouses' emotional distress, a statistically significant relationship between mood factors of the patients and their spouses was found.

The patients' Tension-Anxiety had statistically significant positive correlations with the spouses' Tension-Anxiety ($r = .41, p < .01$), and Depression-Dejection ($r = .37, p < .05$). The findings show that the more patients felt Tension-Anxiety, the more their spouses felt Tension-Anxiety and Depression-Dejection. Furthermore, the patients' Depression-Dejection had a statistically significant positive

correlation with the spouses' Depression-Dejection ($r = .31, p < .05$). According to this finding, the more patients experienced Depression-Dejection, the more Depression-Dejection their spouses felt. In conclusion, when the patients underwent more Tension-Anxiety or Depression-Dejection, their spouses also felt more Tension-Anxiety and/or Depression-Dejection.

Table 9

Correlation of Patients' and Spouses' Mood Disturbance (N = 80)

| Patients' Mood Disturbance | Spouses' Mood Disturbance | | | | | | |
|----------------------------|---------------------------|------|------|------|------|------|------|
| | T | A | F | C | D | V | TMD |
| Tension-Anxiety (T) | .41** | .28 | .22 | .19 | .37* | .18 | .28 |
| Anger-Hostility (A) | .22 | .26 | -.02 | .16 | .09 | .05 | .14 |
| Fatigue-Inertia (F) | .01 | -.00 | .14 | -.10 | .13 | .02 | .04 |
| Confusion-Bewilderment (C) | .13 | .09 | -.11 | -.18 | .02 | .13 | -.05 |
| Depression-Dejection (D) | .23 | .29 | .10 | .26 | .31* | .04 | .24 |
| Vigor-Activity (V) | -.21 | -.05 | .01 | .21 | -.12 | -.22 | .01 |
| Total TMD score*** (TMD) | .26 | .20 | .09 | -.00 | .23 | .15 | .14 |

* $p < .05$

** $p < .01$

*** Total TMD score = Total Mood Disturbance Score

Discussion

The purposes of this research study were 1) to describe coping strategies and emotional distress and 2) to examine the relationship between coping strategies and the emotional distress of prostate cancer patients and their spouses. A descriptive study was conducted of forty couples of prostate cancer patients and their spouses in southern Thailand. The next section focuses on the discussion of the results in relation to the research questions.

1. Participants' Demographic Characteristics

Forty prostate cancer patients and their spouses, who attended and received treatment at two regional government hospitals in southern Thailand, participated in this study. The age of the prostate cancer patients was consistent with previous studies and the cancer registry in Thailand. All patients in this study were over 50 years of age ($M = 70.35$ years, min-max = 53 - 86 years). This reflects the incidence of prostate cancer in Thailand which is low before the age of 40 and increases rapidly with age after 50 (Vootipruk, 2007). In addition, the results of the study supports the idea that the incidence rate of prostate cancer increases after age 55 years in Asia, including Thailand (Sim & Cheng, 2004). Most of the participants were Buddhist (92.5%). This is related to the fact that Buddhism is the main religion in Thailand. Unsurprisingly, most of the participants had primary school level education (71.3%), as in the past in Thailand most children only attended this basic level of education. The number of members in the families of the participants ranged between 2 to 8 persons, reflecting the extended-family common to Thai culture.

2. Coping Strategies

Most of prostate cancer patients and their spouses in this study identified the same top six coping strategies, but ranked these coping strategies differently. These six coping strategies were the use of emotional support, acceptance, active coping, positive reframing, religion, and the use of instrumental support coping strategies. The patients and their spouses used similar coping strategies probably

because they shared the same problems and faced the issue of prostate cancer together.

Knowing the diagnosis of prostate cancer can induce negative emotional responses in the patients and their spouses, such as shock, worry, and sadness. Both patients and their spouses often used emotional support coping strategies to deal with the cancer because they tried to minimize their negative emotional feelings. Emotional support coping strategies is identified as emotion-focused coping (Roesch et al., 2005) which is aimed at reducing and managing the emotional distress that is associated with a situation (Carver et al., 1989). Even though the time of diagnosis was in the past, the patients and their spouses in this study remembered it as their greatest distress. They still experienced negative emotional feelings, such as anxiety, which were caused by constant uncertainty and managing the effects of treatment. Thus the patients and their spouses in this study still often used emotional support coping strategies to make them feel better when experiencing their negative emotional feelings.

According to Lazarus and Folkman (1984), coping strategies are related to cognitive appraisal whereby individual determines the stimuli and uses options for dealing with it. Active coping is taking action to try to remove or circumvent the stressor (Carver et al., 1989). When the patients and their spouses used active coping it reflected that they used their fighting spirit for dealing with the cancer. Most of the patients were diagnosed with non-metastasis cancer (85%) that is possible to cure or is controllable, so they and their spouses used active coping strategies for fighting with the cancer. The patients and their spouses also tried to find out as much as possible about treatment or choices by asking for advice or help from

physicians, nurses, relatives, or other people. These actions indicated that they used instrumental support coping strategies such as seeking advice, assistance or information (Carver et al., 1989).

In this study the patients and spouses often used religion as a coping strategy. Using religion as a coping strategy is related to a participants' belief. Most of the participants were Buddhist (92.5%) and Buddhists believe in *karma*, which means that action in the present or former life influences this life. During the data collection process, the researcher found that when the patients got prostate cancer, most of them and their spouses also thought that it was their previous *karma* or misfortune. When they accepted the consequence of their *karma*, they acted in a Buddhist way, and prayed or sought to make merit. Some of the patients and their spouses made merit and asked forgiveness from enemies from a former life. Therefore, the participants practiced their religion and so coping strategies involving religion were important strategies in dealing with the illness.

Furthermore, the results of this study show that acceptance was one coping strategy that was often used by the participants. Acceptance is accepting the reality of a stressful situation (Carver et al., 1989). Most of the patients had been diagnosed with prostate cancer 1 to 7 years previously. The length of time from when the patients and their spouses knew the diagnosis might influence their coping strategies, and for them to accept the prostate cancer as a reality. In addition, as mentioned earlier, most of the patients and their spouses were Buddhists and believed in *karma*, thus they also used acceptance coping strategies to deal with the prostate cancer. In addition, most of the patients and their spouses in this study were elderly. This also influenced them to use these coping strategies, because people at different

ages use different coping strategies to deal with stressful events. In this study the results concerning the use of acceptance coping strategies are consistent with the finding of previous studies. These show that acceptance was the coping strategy most used by long-time cancer survivors and older adult cancer patients, including those with prostate cancer (Deiming et al., 2006).

In brief, the prostate cancer patients and their spouses used several coping strategies to confront prostate cancer. The coping strategies which were used more often by the patients and their spouses were related to the time of diagnosis, appraisal, belief and the age of the participants.

3. Emotional Distress

This study measured emotional distress in both prostate cancer patients and their spouses. The patients had emotional distress because they were affected by the illness as they were patients. The spouses had emotional distress because they shared the problems and feelings of the patients throughout the diagnosis of prostate cancer and its treatment. Even though, spouses are very willing to look after their husband as their loved one, the role of caregiver can increase stress. The emotional distress scores were an average of 6.40 and 4.45 for the patients and their spouses, respectively. These scores were at a low level, as compared to the possible scores which ranged between -20 to 80.

Emotional distress is an unpleasant emotional experience that may be influenced by many factors. The perception of a health threat, in this case the diagnosis of prostate cancer, is one factor that influences emotional distress. The more patients perceive their cancer negatively, the more emotional distress they will

experience. The findings show that the participants' perception scores of the severity of the illness are an average of 4.28 and 6.05 (possible score = 0 - 10) for the patients and spouses, respectively. It was also found that if the patients and their spouses did not perceive prostate cancer as an extreme illness, then they had low emotional distress. Another factor which influences the level of emotional distress is the time of diagnosis. In the present study most of the patients and their spouses had known of the diagnosis for more than one year, which is considered as a long period after diagnosis. As Edgar et al. (1997) noted, the time of diagnosis is the most distressing moment. It is, therefore, not surprising that the present study showed a low level of emotional distress.

The stage of the cancer, and cancer symptoms and its treatment are also risk factors causing distress (Ahlberg et al., 2004; Ahlberg et al., 2005). The majority of the patients in this study were diagnosed as non-metastasis outside the prostate. The patients' cancer stage was related to the level of emotional distress, and the majority of the patients in this study were in the early stage in which a cure is possible. In addition, prostate cancer patients have high survival rates (Vootipruk, 2007). The high survival rate and long survival time of prostate cancer patients make the patients and their spouses live with the cancer as they see it as less threatening (Ahmad, Musil, Zauszniewski, & Resnick, 2005). Therefore, because the cancer was at an early, curable stage and gave the patients a long survival time, the patients and spouses were found to experience low emotional distress. This is consistent with the previous studies (Ahlberg et al., 2004; Ahlberg et al., 2005). However, in this study the cancer symptoms and its treatment could not be used to explain the level of emotional distress because this study did not examine the cancer symptoms and the

effects of its treatment on the participants. Data relating to cancer symptoms and the side effects of its treatment were found during data collection. However, the data was probably not strong enough to support that the level of emotional distress in this study was influenced by the symptoms and its treatments.

Another possible factor causing emotional distress for the patients and their spouses is income status. All of the patients did not pay the cost of cancer treatment because they had the benefit of universal coverage, or could be reimbursed from government or state enterprises and elderly welfare. In addition, most of the participants had an adequate family income. This is consistent with previous studies. Madden (2006) and Northouse et al. (2000) found that cancer patients who have marital problems, life stressors, lack of family support, and financial strains, have more stressors. Thus, the level of emotional distress of the participants was also related to their income status.

The finding in this study also revealed that the prostate cancer patients had more emotional distress compared to their spouses. This finding is consistent with a previous study (Zakowski et al., 2003) who found that the patients had higher emotional distress than their spouses. This study indicated that male cancer patients are less likely to express their emotions and have different patterns of social support compared to the females. These factors may cause emotional distress in the patients. However, this finding of the present study was not consistent with some previous studies (Northouse et al., 2000; Soloway, Soloway, Kim, & Kava, 2005; Uchitomi et al., 2000). Northouse and colleagues (2000) demonstrated that males had less emotional distress than female, no matter whether they were patients or spouses. Similarly, Soloway and colleagues (2005) found that spouses of prostate cancer

patients were more likely to be psychologically distressed than the patients. Another study found that male cancer patients might receive support from their wives and daughters but the females might not receive support from their husband. This suggests that females are at greater risk of depression than the males (Uchitomi et al., 2000). Thus, the results of this present study do not establish that gender is a factor that influences the emotional distress of prostate cancer patients and their spouses.

In conclusion, the emotional distress of prostate cancer patients and their spouses in the present study were related to perceptions regarding to the cancer, the length of time the diagnosis has been known, income status, and the stage of the cancer.

4. Relationship Between Coping Strategies and Emotional Distress of Prostate Cancer Patients, and Relationship Between Coping Strategies and Emotional Distress of Spouses

In general, the finding in this study showed a statistically significant correlation between eight coping strategies and emotional distress and/or six subscales of mood factors. The eight coping strategies were active coping, substance use, use of emotional support, behavioral disengagement, positive reframing, self-blame, humor, and religion.

Four of the eight coping strategies had a statistically significant correlation with emotional distress and/or mood factors in both prostate cancer patients and their spouses. These were active coping, substance use, use of emotional support, and behavioral disengagement. The positive reframing, self-blame, humor,

and religious coping strategies had a statistically significant correlation with mood factors only in the patients.

Lazarus and Folkman (1984) stated that coping is determined by cognitive appraisal and the individual's primary appraisal and these influence the encounter with the stressor and this affects secondary appraisal. Coping strategies can be defined as problem-focused and emotion-focused coping, and approach-avoidance coping (Lazarus & Folkman, 1984; Roesch et al., 2005). Coping results in a reduction of stress (Halstead & Fernsler, 1994) and this supports Lazarus's Theory of Stress. The present study found that prostate cancer patients and their spouses who used active coping often and used emotional support coping strategies had lower emotional distress and less negative mood responses. The patients and their spouses who used substance use more and behavioral disengagement had higher emotional distress and more negative mood responses. Furthermore, the spouses who mostly used self-blame and humor had more negative mood responses. Only positive reframing was used by the spouses that showed a high response of a positive mood (Vigor-Activity). If the spouses used more positive reframing, they would have more Vigor-Activity mood.

The findings revealed that active coping and use of emotional support coping strategies resulted in reduction of emotional distress, and substance use and behavioral disengagement coping strategies resulted in increasing of emotional distress in these patients and/or their spouses. This is consistent with previous studies (Roesch et al., 2005; Perczek, Bruke, Carver, Krongrad, & Terris, 2002). Roesch et al. (2005) undertook a meta-analysis review showed that prostate cancer patients who used more approach coping (active coping) had less psychological problems patients who used more avoidance coping (behavioral disengagement, substance, humor, and

self-blame). The results from Perczek and colleagues (2002) also support the findings of this study that avoidance coping was a predictor of increased distress in prostate cancer patients. Thus, the findings in the current study support those of previous studies. Prostate cancer patients and their spouses who coped with the stress of the cancer diagnosis by using avoidance coping strategies were at higher risk of emotional distress than those who use approach coping.

5. Relationship between Coping Strategies and Emotional Distress of Prostate Cancer Patients and Their Spouses

The findings of the present study demonstrated that there was a statistically significant negative correlation between patients' coping strategies (active coping) and their spouses' emotional distress ($r = -.34, p < .05$). The results of previous studies on prostate cancer patients and their spouses have also revealed that there is a relationship between coping strategies and emotional distress. A study found that coping strategies of spouses of prostate cancer patients were related to the patients' distress, suggesting that the more spouses used problem-solving, the less the distress of patients (Ko et al., 2005). In addition, when the patients used more avoidance, their spouses had more anxiety or depression (Ey et al., 1998).

The spouses' coping strategies were not significantly correlated with the patients' emotional distress, and the patients' emotional distress was not significantly correlated with their spouses' emotional distress. However, there were statistically significant correlations between coping strategies' and mood factors subscales (Table 8-9). The patients' emotional distress was not correlated with their spouses' emotional distress which is inconsistent with previous studies (Ko et al.,

2005; Northouse et al., 2001; Northouse et al., 1998). Ko and colleagues (2005) demonstrated that the spouse's distress was significantly related to the patient's distress. The findings of other previous studies show that cancer patients' emotional distress had strong effects on their spouses' emotional distress (Northouse et al., 2001; Northouse et al., 1998). Similarly, the prostate cancer patients' psychological distress was correlated with their spouses' psychological distress (Kim et al., 2008).

However, there are statistically significant correlations between prostate cancer patients' and their spouses' mood factors subscales in this study. The patients' mood was related to their spouses' mood because the spouses are usually the main caregiver in both supporting the patients' emotions and looking after them. Moreover, one study established that spouses understand their husband's experience with prostate cancer (Kiss & Meryn, 2001). Thus, prostate cancer patients and their spouses directly feel the effect of the treatment and face the cancer together. The present study found that when the patients had more response in the Tension-Anxiety or Depression-Dejection mood factors, their spouses also had more response in the Tension-Anxiety and/or Depression-Dejection mood factor. These results were also reported in a previous study which found that the patients' and spouses' anxiety or depression was related to each other (Ey et al., 1998).

In conclusion, this study found that there was no statistically significant correlation between the spouses' coping strategies and the patients' emotional distress. There was no statistically significant between the emotional distress of the patients and their spouses. However, a statistically significant correlation between the subscales among both variables was found. It would be

interesting to further investigate other factors contributing to emotional distress in patients facing prostate cancer and their spouses.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

This descriptive correlational study was designed to describe and examine the relationship between coping strategies and emotional distress of prostate cancer patients and their spouses. It was conducted at two regional government hospitals in southern Thailand. Data were collected from January 4, 2009 to April 29, 2009. The participants consisted of forty prostate cancer patients and their spouses. The participants were asked to complete questionnaires; one for patients and another one for spouses. Each questionnaire consisted of three parts: demographic characteristics, the Brief COPE; and the Profile of Mood State-Brief. The data were analyzed by using a computer program. This chapter provides a summary of the results, the strengths and limitations of the study, and implications and recommendations are made and addressed.

Summary of the Study Results

Most of the participants were Buddhist (92.5%) with a primary school education, and were unemployed but had adequate incomes status. The mean age of the patients was 70.35 years whereas the mean age of the spouses was 65.40 years. They had been married and had lived together for an average of 42.85 years. Most of the patients had known their diagnosis as prostate cancer for one year or more. The prostate cancer patients were less concerned about the severity of the disease less than their spouses.

The most commonly used coping strategies used by the prostate cancer patients and their spouses were emotional support, acceptance, and active coping. Similarly, most patients and spouses used the same top six coping strategies; active coping, emotional support, acceptance, positive reframing, religion, and use of instrumental support. However, they ranked them differently. The study demonstrated that the patients had higher emotional distress than their spouses.

Finally, the study findings showed a statistically significant correlation between patients' coping strategies and their emotional distress. The spouses' coping strategies also had a statistically significant correlation with their emotional distress. The results revealed an overall relationship between coping strategies and emotional distress in both patients and spouses. However, one showed a negative statistically significant relationship between the patients' active coping and spouses' emotional distress. Although the patients' emotional distress was not associated with the spouses' coping strategies and emotional distress, there were statistically significant correlations among the subscales.

Strengths and Limitations

The strengths of this study are identified. The present study was conducted at two regional government hospitals. They cater for that various groups of patients from many surrounding provinces, and also have distinguished reputations, especially in dealing with prostate cancer patients. The data were collected only by the researcher and all participants received full information. Thus, all participants fully understood their roles in this study. On occasions the patients and their spouses could not answer the questionnaires at the same time. The researcher tried to ensure

that both the patients and their spouses answered within minimal intervals in order to get the information from them when the patients and their spouses were in similar emotional states.

However, this study has some limitations such as the limited number of patients. The ideal number of subjects regarding the effects of size and power analysis could not be employed because of the small population of patients. Another potential limitation of this study is the coping strategies questionnaire. Although specific attention was given to select the questionnaire, the Brief COPE might be inappropriate for Thai patients. The consistency of the Brief COPE was .74 and .61 for the entire scale in the patients and their spouses, it could deal with the coping strategy used by patients in this study, but adaptation was needed in using it with Thai patients. In addition, one item of the Brief COPE is composed of only 2 subscales. It might effect on the skewness and/or kurtosis results of some subscales of the Brief COPE were higher than the normal range. The last period of the data collection from 12 spouses had to be done by phone; there was a risk of increasing the errors in the data. Therefore, these limitations mean that the results of the present study should be generalized with caution.

Implications and Recommendations

The results of the study show the relation between coping strategies and emotional distress in both prostate cancer patients and their spouses. However, there was only a statistically significant relationship between the patient's active coping strategies and his spouse's emotional distress. In considering the subscale of mood factors, there were some relationships between coping strategies and the

emotional distress of prostate cancer patients and their spouses. Although, the results indicate which coping strategies lead to changes in the emotional distress in prostate cancer patients and their spouses, not all coping strategies could reduce emotional distress. Thus, it would be useful to apply the results of this study to encourage the patients and their spouses to use appropriate coping strategies. These are active coping strategies and the use of emotional support coping strategies which can be used to reduce and prevent negative moods or emotional distress in patients and spouses.

The results further suggest that the use of emotional support coping strategies functioned to reduce negative moods and emotional distress in both patients and their spouses. In addition, the spouses used denial coping strategies less than the patients to deal with the illness. Other than that, the spouses had less emotional distress than the patients, indicating that spouses may be more tolerant about such a stressful event. These are interesting pointers to help prostate cancer patients to cope with the illness by using family support. Nurses should be involved with spouses of prostate cancer patients to provide intervention to help the patients to confront the illness. In addition, knowledge of coping strategies and emotional distress in prostate cancer patients and their spouses is valuable to nurses. It could provide a basis for nurses to further develop appropriate nursing interventions and allocating better care to reduce emotional distress in both prostate cancer patients and their spouses.

Furthermore, nurses have to be aware of the importance of coping strategies used by patients and their spouses to face prostate cancer. Each coping strategy used by patients and spouses may affect the emotional distress of both patients and their spouses and vice versa. As mentioned earlier, there were some

relationships between coping strategies and the emotional distress of the patients and their spouses. This study suggests that nurses should be concerned about providing care for spouses of the prostate cancer patients to reach the goal of holistic care.

Finally, further studies of the factors affecting coping strategies and emotional distress should be undertaken. This present study could be repeated with larger sample sizes in other parts of Thailand. In addition, a qualitative study should be conducted to understand the lived experiences of prostate cancer patients and their spouses and family members. As mentioned previously, a coping strategy assessment tool for Thais needs to be developed. A further recommendation is to conduct intervention research relating to issues of family support. These studies could be undertaken in order to enhance appropriate coping strategies, reduce emotional distress, and reduce the effects of prostate cancer on patients and their spouses.

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APPENDIXES

APPENDIX A

SKEWNESS AND KURTOSIS OF SUBSCALES

Table 10

*Skewness and Kurtosis of Brief COPE Subscales of Prostate Cancer Patients and
Their Spouses (N = 80)*

| Coping strategies | Patients (<i>n</i> = 40) | | Spouses (<i>n</i> = 40) | |
|-----------------------------|---------------------------|----------|--------------------------|----------|
| | Skewness | Kurtosis | Skewness | Kurtosis |
| Self-distraction | .46 | -.66 | .41 | -.70 |
| Active coping | -.85 | 1.32 | -1.53 | 2.37 |
| Denial | .04 | -.99 | 1.14 | -.42 |
| Substance use | 2.82 | 7.94 | 3.66 | 13.38 |
| Use of emotional support | -1.71 | 2.98 | -.38 | -.96 |
| Behavioral disengagement | 1.44 | 1.30 | 1.25 | .61 |
| Venting | .66 | .49 | .23 | -.71 |
| Use of instrumental support | .34 | -1.12 | .07 | -1.57 |
| Positive reframing | -.36 | -.91 | -.59 | -.75 |
| Self-blame | 1.76 | 2.30 | 3.31 | 11.56 |
| Planning | .43 | -.65 | -.07 | -1.14 |
| Humor | 1.12 | .05 | 1.04 | -.28 |
| Acceptance | -1.09 | .80 | -.85 | -.36 |
| Religion | .19 | -1.56 | -.50 | -.96 |

Table 11

Skewness and Kurtosis of POMS-B Subscales of Prostate Cancer Patients and Their

Spouses (N = 80)

| Coping strategies | Patients (<i>n</i> = 40) | | Spouses (<i>n</i> = 40) | |
|------------------------------|---------------------------|----------|--------------------------|----------|
| | Skewness | Kurtosis | Skewness | Kurtosis |
| Tension-Anxiety | .64 | -.27 | 2.04 | 6.41 |
| Anger-Hostility | 1.47 | 2.28 | .89 | -.03 |
| Fatigue-Inertia | 1.37 | 1.85 | 1.22 | .97 |
| Confusion-Bewilderment | 1.10 | 1.36 | .95 | 1.05 |
| Depression-Dejection | 1.52 | 2.03 | 1.03 | -.19 |
| Vigor-Activity | .10 | -.44 | .78 | .45 |
| Total Mood Disturbance Score | .86 | .66 | .84 | .92 |

APPENDIX B

INFORMED CONSENT FORM

Dear patients and spouses,

My name is Norrakamon Toniti. I am a second year nursing student in the Master of Nursing Science, International Program at the Prince of Songkla University, Songkhla, Thailand. I am conducting a study on Coping Strategies and Emotional Distress of Prostate Cancer Patients and Their Spouses. The objectives of this study are to examine coping strategies and emotional distress of prostate cancer dyads and to examine any relationship there may or may not be between coping strategies and emotional distress of prostate cancer dyads. The outcome of the study will contribute to nursing practice, nursing education, and nursing research in Thailand

Your participation is voluntary; you can withdraw at any time without giving a reason. This study does not affect any care you receive from any health care setting. This study will cause no serious harm to participants, but it may affect your feelings about the disease and induce negative emotional responses such as sadness, anxiety, or worry. However, the researcher will provide nursing interventions if needed until you feel relaxed and get better.

All of the information will be kept confidential and I will destroy it after finishing the study process. The information will be used to write the report that will be the overview of the study and the information obtained will be useful for health care providers to help them care for other patients in similar situations. You do not

hesitate to ask me if you have any problems regarding to this research, I will be glad to help you and explain them to you.

You have right to participate or not participate in this study. If you agree to participate by answering questionnaire (you can ignore any question that you do not wish to answer), please sign your signature or state that you agree.

Your signature on the consent form or your agreement in words will mean that you understand this form and will participate in this research.

| | |
|--------------------------------|-------------------------|
| | |
| () | (Norrakamon Toniti) |
| Signature/ Name of participant | Signature of Researcher |
| Date..... | Date..... |

If you have any questions or need more information, you can contact me at the following address:

Norrakamon Toniti
 Nursing Student Dormitory
 Faculty of Nursing, Prince of Songkla University
 Hat Yai, Songkhla, 90112

APPENDIX C

INSTRUMENTS

Code: Date/Time :

Hospital: 1) Hospital A 2) Hospital B

Department:

Introduction: this instrument is divided into three parts. Part 1 is demographic data. Part 2 is related to coping strategies. Part 3 is related to emotional distress.

Part 1: Demographic Data

Direction: There is no right or wrong answer. If you do not understand or clear about these questions you can ask me. Please write “√” or the appropriate section.

Demographic Questionnaire of the Patient

1. Age years

2. Religion

..... 1) Buddhism

..... 2) Islam

..... 3) Christianity

..... 4) Other (please specify).....

3. Education level

..... 1) None

..... 2) Primary school

..... 3) Junior high school

..... 4) Senior high school

..... 5) Diploma

..... 6) Graduate

..... 7) Other (please specify)

4. Number of children persons

5. Number of members in family persons

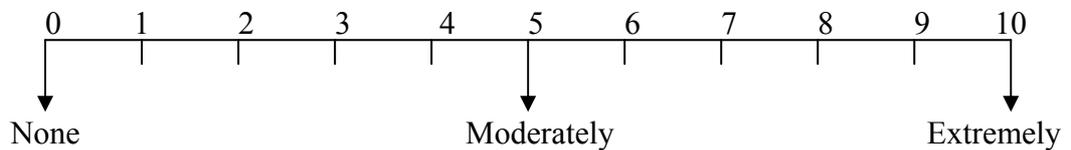
11. Previous treatment

- 1) Surgery specify
- 2) Radiation therapy times
- 3) Hormonal therapy for.....monthyear
- 4) Chemotherapy cycles

12. Present treatment

- 1) Surgery specify
- 2) Radiation therapy times
- 3) Hormonal therapy for.....monthyear
- 4) Chemotherapy cycles

13. Severity score; the higher score indicate the higher severity of the prostate cancer that you perceived



For the researcher:

Staging or pathological of prostate cancer

- 1) Metastasis 2) Non-mestastasis

Organs of cancer metastasis(if have)

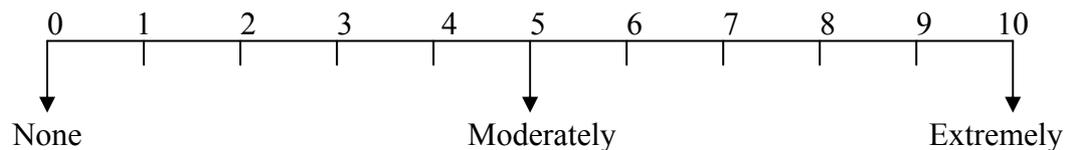
Demographic Questionnaire of the Spouse

1. Age years
2. Religion

| | |
|-----------------------|--------------------------------------|
| 1) Buddhism | 2) Islam |
| 3) Christianity | 4) Other (please specify)..... |
3. Education level

| | |
|---------------------------------------|-----------------------------|
| 1) None | 2) Primary school |
| 3) Junior high school | 4) Senior high school |
| 5) Diploma | 6) Graduate |
| 7) Other (please specify) | |
4. Occupation

| | |
|---|------------------------------------|
| 1) Unemployed | 2) Farmer |
| 3) Government official/State enterprises official | |
| 4) Government employee | 5) Private company |
| 6) Business/seller | 7) Retired government worker |
| 8) Other (please specify) | |
5. Length of married..... years
6. Severity score; the higher score indicate the higher severity of the prostate cancer that you perceived



Part 2: Coping Strategies

The Brief COPE

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when *you* experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you *usually* do when you are under a lot of stress.

Then respond to each of the following items by blackening one number on your answer sheet for each, using the response choices listed just below. Please try to respond to each item *separately in your mind from each other item*. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer *every* item. There are no “right” or “wrong” answers, so choose the most accurate answer for YOU-- not what you think “most people” would say or do. Indicate what YOU usually do when YOU experience a stressful event.

- | | | | |
|---|--|---|-----------------------------------|
| 1 | 2 | 3 | 4 |
| I usually <u>don't</u> do this <u>at all</u> | I usually do this <u>a little bit</u> | I usually do this <u>a medium amount</u> | I usually do this <u>a lot</u> |

| Coping Strategies | 1 | 2 | 3 | 4 |
|--|---|---|---|---|
| 1. I've been turning to work or other activities to take my mind off things. | | | | |
| 2. I've been concentrating my efforts on doing something about the situation I'm in. | | | | |
| 3. I've been saying to myself "this isn't real." | | | | |
| 4. | | | | |
| 5. | | | | |
| 6. | | | | |
| 7. | | | | |
| 8. | | | | |
| 9. | | | | |
| 10. | | | | |

| Coping Strategies | 1 | 2 | 3 | 4 |
|--|---|---|---|---|
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. I've been blaming myself for things that happened. | | | | |
| 27. I've been praying or meditating. | | | | |
| 28. I've been making fun of the situation. | | | | |

Part 3: Emotional Distress

Profile of Mood States-Brief (POMS-B)

Below is a list of words that describe feelings people have. Please read each one carefully, and rate each from 0 to 4 using the scale below to describe how you are feeling in the past week including now.

- 0 = Not at all
- 1 = A Little
- 2 = Moderately
- 3 = Quite a bit
- 4 = Extremely

| Mood | 0 | 1 | 2 | 3 | 4 |
|-------------|----------|----------|----------|----------|----------|
| 1. Tense | | | | | |
| 2. Angry | | | | | |
| 3. Worn out | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| 6. | | | | | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| 12. | | | | | |
| 13. | | | | | |
| 14. | | | | | |
| 15. | | | | | |
| 16. | | | | | |
| 17. | | | | | |
| 18. | | | | | |
| 19. | | | | | |

| Mood | 0 | 1 | 2 | 3 | 4 |
|------------------|----------|----------|----------|----------|----------|
| 20. | | | | | |
| 21. | | | | | |
| 22. | | | | | |
| 23. | | | | | |
| 24. | | | | | |
| 25. | | | | | |
| 26. | | | | | |
| 27. | | | | | |
| 28. Bad-tempered | | | | | |
| 29. Forgetful | | | | | |
| 30. Vigorous | | | | | |