THE EFFECT OF UNCERTAINTY MANAGEMENT PROGRAM ON QUALITY OF LIFE AMONG VIETNAMESE WOMEN WITH POST MASTECTOMY

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A Dissertation Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy Program in Nursing Science
Faculty of Nursing
Chulalongkorn University
Academic Year 2017

ผลของโปรแกรมการจัดการความไม่แน่นอนต่อคุณภาพชีวิตในหญิงเวียดนามหลังผ่าตัดเต้านม

นางฉวน ฮา ทิ นู

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาพยาบาลศาสตรดุษฎีบัณฑิต
สาขาวิชาพยาบาลศาสตร์
คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
ปีการศึกษา 2560

Thesis Title	THE EFFECT OF UNCERTAINTY MANAGEMENT PROGRAM ON QUALITY OF LIFE AMONG VIETNAMESE WOMEN WITH POST MASTECTOMY
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ฉวน ฮา ทิ นู : ผลของโปรแกรมการจัดการความไม่แน่นอนต่อคุณภาพชีวิตในหญิงเวียดนามหลังผ่าตัดเต้านม (THE EFFECT OF UNCERTAINTY MANAGEMENT PROGRAM ON QUALITY OF LIFE AMONG VIETNAMESE WOMEN WITH POST MASTECTOMY) อ.ที่ปรึกษาวิทยานิพนธ์หลัก: รศ. ดร.สุรีพร ธนศิลป์, อ.ที่ปรึกษาวิทยานิพนธ์ร่วม: รศ. ดร.รัตน์ศิริ ทาโต, 188 หน้า.

การวิจัยกึ่งทดลองนี้มีวัตถุประสงค์ เพื่อศึกษาผลของโปรแกรมการจัดการความไม่แน่นอนต่อคุณภาพชีวิตของสตรีชาวเวียดนามหลังผ่าตัดมะเร็งเต้านม กลุ่มตัวอย่าง คือ สตรีชาวเวียดนามหลังผ่าตัดมะเร็งเต้านม จำนวน 115 คน แบ่งเป็นกลุ่มทดลอง 57 คน และกลุ่มควบคุม 58 คน โดยกลุ่มทดลองได้รับโปรแกรมการจัดการความไม่แน่นอนและการดูแลตามปกติ ในขณะที่กลุ่มควบคุมได้รับเฉพาะการดูแลตามปกติ ใช้ระยะเวลาในการทดลอง 3 สัปดาห์ เครื่องมือที่ใช้ในการวิจัย ประกอบด้วยโปรแกรมการจัดการความไม่แน่นอน และแบบวัดคุณภาพชีวิต Modified Quality of Life Index Scale Vietnamese Version ที่มีค่าสัมประสิทธิ์แอลฟ่าของครอนบาค เท่ากับ .81

ผลการวิจัย พบว่า กลุ่มทดลองมีค่าเฉลี่ยคะแนนคุณภาพชีวิตสูงกว่ากลุ่มควบคุม อย่างมีนัยสำคัญทางสถิติที่ $p<.05$ เมื่อพิจารณาคุณภาพชีวิตเป็นรายด้าน พบว่า ค่าเฉลี่ยคะแนนคุณภาพชีวิตด้านสุขภาพทางกาย ด้านจิตใจ ด้านภาพลักษณ์ และด้านสังคมของกลุ่มทดลองสูงกว่ากลุ่มควบคุม อย่างมีนัยสำคัญทางสถิติที่ $p<.05$ ส่วนด้านการตอบสนองต่อการรักษาในกลุ่มทดลองและกลุ่มควบคุมไม่มีความแตกต่างกัน ดังนั้น สามารถสรุปได้ว่า โปรแกรมการจัดการความไม่แน่นอนสามารถเพิ่มคุณภาพชีวิตของสตรีหลังผ่าตัดมะเร็งเต้านม 3 สัปดาห์ได้

สาขาวิชา พยาบาลศาสตร์ ลายมือชื่อนิสิต .....

ปีการศึกษา 2560 ลายมือชื่อ อ.ที่ปรึกษาหลัก .....

ลายมือชื่อ อ.ที่ปรึกษาร่วม .....

5677401736 : MAJOR NURSING SCIENCE
KEYWORDS: UNCERTAINTY / QUALITY OF LIFE / POST-MASTECTOMY / NURSING PROGRAM

The aim of this study was to test the effect of the Uncertainty Management Program (UMP) on quality of life among Vietnamese women at 3-weeks post mastectomy. The quasi-experimental design with posttest only was conducted in 115 women with post mastectomy who were assigned in experimental group (n=57) and control group (n=58). The experimental group received the UMP and routine care while the control group received only routine care. Participants were assessed at 3-weeks post mastectomy using the modified Quality of Life Index Scale Vietnamese version with Cronbach's alpha coefficient of .81.

It was found that at 3-weeks post-mastectomy, the mean score of QOL in the experimental group was significantly higher than the mean score of QOL in the control group ($t=7.71$, $p <.001$). In addition, it was found that 4 dimensions of QOL in the experimental group, namely psychological well-being, physical wellbeing, body image and social concerns, were significantly higher than those of the control group ($t=7.48$, 8.83, 4.37, and 6.25, $p < .001$). However, the treatment responses of women in both groups were not different at 3-weeks post-mastectomy. In summary, the UMP could improve quality of life of breast cancer patients at 3-weeks post mastectomy.

Field of Study: Nursing Science
Academic Year: 2017

Student's Signature .....
Advisor's Signature .....
Co-Advisor's Signature .....

ACKNOWLEDGEMENTS

From the bottom of my heart, I would like to send my gratefulness and respectfulness to Assoc.Prof. Dr.Sureeporn Thanasilp, my advisor, for her devoting, outstanding and supporting. On my PhD studying, my advisor always helped me overcome many obstacles with her patience and her warming heart. Most of her valuable lessons in nursing science, nursing research, and social life constitutes to my mature today. I would like to send my sincerely thank to Assoc.Prof. Dr.Ratsiri Thato, my co-advisor for most of her critical comments which challenge me continues to improve my knowledge in the process of conducting the valuable research. Thank you both of my advisors for most of their time and efforts to help me at the stage of preparing for the final defend. This is the most important time with me and I could not achieve the successfullness without their supports

I greatly thank to Professor. Dr.Somchit Hanucharurnkul, Assoc. Prof. Police Captain, Dr.Yupin Aungsuroch, Asst.Prof. Dr.Sunida Preechawong and Asst.Prof. Dr.Natkamol Chansatiporn, my Dissertation committee members for most of their contributing comments to help me look at my study with the open view and instruct ideas to make my Dissertation better.

I also send my best thanks to all of the teachers in Faculty of Nursing, Chulalongkorn University for most of their outstanding and professional teaching in the PhD of Nursing program. I have learnt not only nursing knowledge and nursing research but also lessons of communication, teaching and learning process.

My heart gives the arrow to all of my classmates, my seniors and juniors in PhD Nursing Chulalongkorn's home. They have offered me the most beautiful time in my studying life by sharing most knowledge, experiences and special memories, the most important is the integrating of diversity cultures in my social contact.

My Dissertation was success by the contribution of the breast cancer women with mastectomy in the Surgical Breast Cancer Ward, the Oncology Hospital in Ho Chi Minh City, Viet Nam. I send my thanks to all of my participants for their experiences and their sharing.

The last but not least, I would like to send my deep gratitude to my parents and my husband, with their enduring efforts to protect and support me throughout four years. My health, my happiness, my tears were put on their shoulders. And I want to say my children's name, Bong and Ball for the strength that I have whenever thought about them. With all my love.

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CHAPTER I

INTRODUCTION

Background and significance of the study

Breast cancer is the predominant type of cancer that causes death in Vietnamese women, with 12,000 new cases per year (Breast Cancer Network Vietnam, 2014). More than 70% of women suffering from breast cancer in Vietnam receive mastectomy as the most important treatment modality (Lan, Laohasiriwong, & Stewart, 2013a; Thiep et al., 2009; Trieu et al., 2011). However, it was reported that the percentage of those suitable for aesthetic surgical procedures like breast reservation or reconstruction was only 10% as the consequence of late-stage diagnosis, complex medical health status and high cost of treatment (Body, 2011; Lan et al., 2013b; Nguyen, Hood, & Belgrave, 2012). Studies have shown that women who have undergone a mastectomy have a poorer quality of life than those implementing immediate breast reconstruction or conservation (Lee, Sunu, & Pignone, 2009a; Nissen et al., 2001; Thiep et al., 2009). The quality of life score among post-mastectomy women in Vietnam around 35.2 to 52.7 was lower (Binh et al., 2015; Duong, 2015) than that of women in other developing countries which is about 64.5 to 72.7 (Haddou et al., 2016; Min et al., 2015; Rahman et al., 2014).

In regard to quality of life post-mastectomy, systematic reviews show that the early stage of post-mastectomy (one-month transition time after mastectomy to chemotherapy) witnesses a poor level of adjustment and decreased quality of life (Chen et al., 2010; Paraskevi, 2012). Evidence has shown that decreased quality of life in the early post-mastectomy period is a reliable indicator of treatment

discontinuation in women with breast cancer after mastectomy (King et al., 2000; Richardson et al., 2007). The poor quality of life in the post-mastectomy stage leads to a recurrence of cancer, metastasis or even death in this group (Coates et al., 2000; Mols et al., 2005). Evidence implies that there is a rising trend in mortality rates among Vietnamese breast cancer women undergoing mastectomy, whereas the 5-year survival rate was low compared to other countries in ASEAN region (Jemal et al., 2011; PfizerFacts, 2008; Vuong et al., 2010). A new vision concerned with the quality of life of breast cancer women is therefore proposed in this research that care-givers should support for QOL right after mastectomy.

In the nursing context, quality of life (QOL) is theoretically defined as the subjective perception of one's lived experience (Plummer & Molzahn, 2009). However, the concept of QOL post-mastectomy refers to the quality of life in the post-mastectomy construct. Therefore, the definition of quality of life post-mastectomy needs to cover most aspects of mastectomy that influence a woman's life post-mastectomy. In this study, quality of life is defined as a perception of the women's lived experience, including physical well-being, psychological well-being, body image concerns, social concerns, and diagnosis/treatment response post-mastectomy (Padilla & Grant, 1985).

From reviewing the literature, factors contributing to quality of life in the early stage of post mastectomy can be examined in terms of both direct and indirect effects. The direct factors influencing QOL are nursing support, social support, post-surgery symptoms, negative emotions, and uncertainty. Nurses, family caregivers, partners, friends or colleagues provide support which has a positive effect on QOL (Leung, Pachana, & McLaughlin, 2014; Salonen et al., 2013). Symptoms post-mastectomy

include: lymphedema, pain, stiffness, breast incision sensitivity, fatigue, weight loss and sleep disorder, all of which have a negative influence on QOL (Champion et al., 2014; Taghian et al., 2014). Negative mood state, anxiety or negative body image post mastectomy also lead to a negative effect on QOL (Bagheri & Mazaheri, 2015; Razdan et al., 2016; Tirgari et al., 2011). Uncertainty among women undergoing mastectomy commonly exists in 1-2 weeks after surgery and also directly lowers quality of life (Hong, 2000; Valeria, Daniela, & Lara, 2014). As regards the indirect effects, uncertainty is the most common mediator that impacts the QOL. Uncertainty mediates the effects of social support and surgical symptoms on QOL post mastectomy (Clayton, Mishel, & Belyea, 2006; Sammarco & Konecny, 2008; Stavrou et al., 2009b; Wonghongkul et al., 2006). Negative body image and poor communication skills also have an effect on QOL through the mediation of uncertainty (Clayton et al., 2006; Kim, Lee, & Lee, 2012). Overall, factors that directly affect QOL and mediate QOL through uncertainty were social support, surgical symptoms, and negative body image. Therefore, interventions which manipulate uncertainty in the aspects of surgical symptoms, negative body image, and social support will have a positive effect on quality of life.

Uncertainty in illness is defined as the inability to determine the meaning of an illness-related event and occurs when an individual is unable to predict the outcomes accurately (Mishel, 1988). Uncertainty in breast cancer women post mastectomy is based on Mishel's concept in 1988 and is defined as a process of: (1) ambiguity concerning mastectomy surgery, (2) complexity of symptoms regarding mastectomy surgery and the system of care, (3) lack of information and skills of self-care for the transition from hospital to home, and (4) unpredictability of the result of treatment

and prognosis. The antecedents of uncertainty are symptoms of mastectomy, unfamiliarity with the system of care, inconsistency of treatment and prognosis and nursing education, nursing communication, and social support. The solution to dealing with uncertainty is coping strategies with the illness related events to improve quality of life.

In Vietnam, studies have shown that a series of complex symptoms that may occur at discharge time includes pain, sensitive breasts, lymphedema, arm stiffness and fatigue with a relatively high incidence rate of more than 40% (Duong, 2015; Hiep, 2010; K Hosiptal Report, 2013). With respect to psychological problems post-mastectomy, approximately 75% of women suffer from distress after mastectomy (Vo et al., 2011) and 40% from negative body image (Vien, 2015). As regards perception of uncertainty, 80% of post-mastectomy women feel they lack information, are unclear in prognosis, process and the cost of treatment, while 50%-60% require nursing support and family support (Chau & Bang, 2014). These reported factors cause prolonged hospital stays, increase the cost of treatment and reduce QOL of post-mastectomy women in Vietnam (Lan et al., 2013b). Remarkably, the phenomenon of uncertainty which occur among post-mastectomy women in Vietnam is similar to that in other countries.

The routine nursing care for post-mastectomy women in Vietnam mostly covers the information of perioperative procedures, anesthesia, intervention for pain, surgical types, post-operative wound care, drainage care, vital sign recovery, and follow up treatment (Vo et al., 2011). However, other aspects like body image concerns, emotional concerns and social concerns, experience of breast and arm symptoms at home were recognized separately in routine care plans or research. There

are no guidelines for post-mastectomy care at home for women and family members. Besides that, after 3 weeks post-mastectomy, women receive the results of their laboratory tests and have to decide the course of further treatment, and this period is the most difficult time for women undergoing mastectomy due to the unpredictable prognosis and treatment response which might lead to a reduction in quality of life post mastectomy. The routine care is probably not holistic because it ignores some psychological factors that may have a primary impact on quality of life post mastectomy.

From existing literature, there are some classifications of intervention with an effect on the uncertainty and QOL. The first type is direct intervention which improves some aspects of QOL, such as social support programs, physical exercises, and other therapies. The nursing support program is reported to make a difference in QOL at 1-week post-mastectomy (Salonen et al., 2013). Systematic reviews also provide evidence that physical self-management could have effective results on physical functioning, emotional and/or social well-being post-mastectomy from week 4 or week 6 after surgery (Van Dijck et al., 2016). Another method in this regard is Qigong, which incredibly has a positive change on surgical symptoms (Fong et al., 2014; Lee, Pittler, & Ernst, 2009b; Lin, 2012) and improves physical strength and ability after 4 weeks (Markdump, 2014) as well as reducing fatigue and anxiety (Lee, Chen, & Yeh, 2006; Reanrhom & Thanasilp, 2014). Some methods concern negative body image post mastectomy in hospital such as mirror therapy (Freysteinson, 2009, 2011, 2012; Tam, 2001), art therapy (Thyme et al., 2009) and relaxation therapy (Olyaie, Toozandehjani, & Neyshabouri, 2015; Paterson, 2015). Overall, almost all previous interventions affect QOL in separate dimensions or based on definitions of

QOL that are different from the concept of QOL post-mastectomy. There is evidence to support that the use of many interventions may enhance QOL of women with post-mastectomy condition. However, the concept of QOL differs in each stage of the disease. In the post-mastectomy stage, QOL largely consists of five dimensions including physical well-being, psychological well-being, body image concerns, social concerns, and diagnosis/treatment response post-mastectomy (Padilla & Grant, 1985b). Therefore, interventions that only address one or two aspects of QOL may be less effective in improving QOL.

The second type of intervention puts effort into reducing uncertainty post mastectomy, but has not considered QOL as an outcome. An informational and emotional consultant together with the social support and communicating positively reduces uncertainty at 1-week post mastectomy (Hong, 2000; Hsu et al., 2010). Another uncertainty management program also reduces uncertainty in post-mastectomy women, leading to improved well-being; however, it was not conducted on women at the post mastectomy stage (Germino et al., 2013; Gil et al., 2006b).

In summary, almost all interventions focus significantly on QOL dimensions such as physical well-being, psychological well-being, body image concerns and social concerns as separate treatments. Interventions, in many cases, have not considered QOL as the whole, integrating 5 dimensions within the concept of QOL post mastectomy. Furthermore, the effects of these interventions on uncertainty post mastectomy do not include QOL as the outcome of mediation by uncertainty. Therefore, the effects of uncertainty on QOL post-mastectomy are still unknown.

Because of this gap of knowledge in caring for post-mastectomy women, the Uncertainty Management Program (UMP), a nursing program based on Mishel's

Theory of Uncertainty in Illness was developed. The UMP combines informational support, emotional support, and social support, together with Thai-style Qigong, with the purpose of lowering the uncertainty which is considered as a danger at 1-week post-mastectomy in the hospital and supporting women with mobilizing strategies to cope with uncertainty at home in order to improve QOL at 3-weeks post-mastectomy. The aim of this study was to examine the effects of the UMP on QOL at 3-weeks post-mastectomy. It was expected that subjects who participated in both the UMP and routine care would have better QOL at 3-weeks post-mastectomy than those who only received routine care.

Objective of the study

To test the effect of Uncertainty Management Program on quality of life among Vietnamese women with breast cancer at 3-weeks after mastectomy.

Specific objective

To compare the difference in quality of life between Vietnamese women with breast cancer who receive UMP and routine care with those receive only routine care at 3-weeks post-mastectomy.

Research question

What are the differences between the quality of life among post-mastectomy women who receive both Uncertainty Management Program (UMP) and routine care, and those who receive only routine care at 3-weeks post-mastectomy in Vietnam?

Scope of the study

The population of this study were women with breast cancer for whom mastectomy was indicated and implemented as a significant surgery treatment at the

Oncology Hospital, the biggest oncological center in the South of Vietnam. The study examines the subjects' quality of life at 3-weeks post-mastectomy, utilizing a quasi-experimental posttest-only control group design. The participants were recruited by inclusion criteria with informed consent and tacit group assigned to the experimental and the control groups. The experimental group received both the UMP and routine care while the control group received only routine care. The independent variable was the Uncertainty Management Program (UMP) and the dependent variable was Quality of Life (QOL).

Framework of the study

The theory of Uncertainty in Illness (Mishel, 1988) provides the theoretical framework for this study. According to Mishel (1988), uncertainty in illness is defined as the inability to arrive at an understanding regarding illness-related events and is generated by the stimuli frame, which consists of unformed pattern of symptoms, unfamiliarity of illness events, and inconsistency of information. Uncertainty can be reduced with the assistance of structure providers, which include education, social support, and credible authorities.

The uncertainty post-mastectomy is considered as a danger, which leads to the coping strategies to improve their adaptation – the ability to return to the women's normal life before the illness. According to Mishel, (1990) individual's uncertainty is the basis of self-organization in which women reformulate their view of life (Mishel, 1990). The degree of uncertainty implies women' adaptation response to return to their usual life. Therefore, QOL was proposed as an adaptation outcome (Clayton et al., 2006; Somjawong, 2010).

In accordance with Mishel's theory, regarding reducing uncertainty in the post-mastectomy stage, we manipulated the stimulate frame and structure providers. **Stimuli frame** theoretically includes symptom pattern, event familiarity and event congruence. First, the post-mastectomy **symptom pattern** comprises both physical and psychological symptoms. **Physical symptoms** are visible symptoms such as muscle and shoulder stiffness, arm edema, pain, sensitive skin, headaches, fatigue, and sleep disturbances, and these symptoms are reported to have a negative effect on QOL (Dodd et al., 2010; Janz et al., 2007). On the other hand, post-mastectomy **psychological symptoms** include negative body image and negative emotions, which are considered as the silent symptoms. While negative emotions are defined as fear, sadness, loss of control, dread or uneasiness caused by the stressful event of mastectomy (Duong, 2015), negative body image, which results from the damaging changes to the physical body by mastectomy surgery, is a particularly serious issue (Bagheri & Mazaheri, 2015; Vien, 2015) as post-mastectomy women have been known to experience many uncomfortable feelings, have difficulty accepting changes to their bodies and find it hard to maintain their sense of female identity (Robson, 2000; Tanik, 2000). Second, **Event familiarity** is the degree to which the situation is repetitive so that post mastectomy women may expect what will happen. Finally, **Event congruence** refers to the consistency between the information and the experienced result of treatment/prognosis. Uncertainty in the post-mastectomy stage can be managed and reduced by strengthening these stimuli frame factors, using informational support, emotional support, and Qigong practice.

Informational support in the UMP involves presenting scientific information about mastectomy surgery, mastectomy procedures, mastectomy-related symptoms,

emotions, nutrition, and skin care. This kind of information helps post-mastectomy women understand and manage their physical symptoms (Chau & Bang, 2014; Knobf, 2002).

Emotional support of UMP acquainted women with the expected emotions normally occurred post-mastectomy and methods to release negative feelings such as disclosing and sharing with others (Sajjad et al., 2016; Yoo et al., 2014). Looking in the mirror is also a beneficial way of reducing negative body image after the first time seeing bodily changes (Freysteinson, 2011).

Qigong practice is the practice of Thai-style Qigong which focuses on breathing, concentration, and movement that help reduce both adverse physical and psychological symptoms. Thai-style Qigong has been reported to reduce shoulder stiffness, lymphedema, and supply energy to reduce fatigue and anxiety in women after mastectomy (Markdump, 2014; Reanrhom & Thanasilp, 2014).

Structure providers in the study consist of nursing education, social support, and credible authorities. In the post-mastectomy stage, doctors, nurses, and family members are the credible authority involved in caring for the women undergoing mastectomy (Meleis et al., 2000; Trieu et al., 2011). In the UMP, structure providers were strengthened by the communication process between nurses and participants both directly and by phone calls in order to enhance nursing support.

The communication between nurses and women in the post-mastectomy stage is based on motivation, encouragement, and close personal contact. Communication guidelines instruct post-mastectomy women to express their internal feelings to others, look for help from others, and seek relationships with others to reduce uncertainty (Cancer Council Australia, 2014; Germino et al., 2013).

Clarifying the system of care in the hospital presents the participants with the source of questions to ask doctors, nurses and other staffs with regards to their responsibilities. **Phone calls** are utilized as reminders to manage their symptoms at home and help maintain the communication between nurses and post-mastectomy women. These calls also serve to support post-mastectomy women in their effort to cope with illness (Clayton et al., 2006; Knobf, 2002).

Coping is important in reducing uncertainty through mobilizing strategies when uncertainty is considered as a danger. The mobilizing strategies include direct action, vigilance, and information seeking (Mishel, 1988). Therefore, before hospital discharge, nurses discuss and set the practicing plan for participants at home. After that, participants would practice physical exercise, Thai-style Qigong, emotion disclosure, communication with family members or friends, independent management of nutrition and skin care, independent collection of information from other sources such as the internet, and media channels at home. The participants could make inquiries and discuss with the nurses via phone calls.

Establishing Uncertainty Management Program

Systematic reviews suggested that the intervention for improving QOL focuses on before and after primary treatment (Stavrou et al., 2009a). Intervention at primary treatment or after that also benefits the QOL in mastectomy women (Sammarco, 2001). Another perspective, is that post- mastectomy women who are well prepared with support and education before being faced with the first change could carry on better later (Knobf, 2002) . Uncertainty was reported to exist at the same time with QOL in women at 1-week after mastectomy (Hong, 2000; Salonen et al., 2013). The initial experience of uncertainty or poor quality of life at the time of

transition from hospital to home may have an influence on the women later in life (Meleis et al., 2000).

Post mastectomy is the sensitive transition stage in which women express uncertainty both at hospital and at home. This period usually takes around 3 weeks from the day of surgery to the day of the first follow-up with physicians to decide on adjuvant or further therapies (Hong, 2000; Valeria et al., 2014). Transitions are considered to be in association with identifiable marker events or critical turning points which involve increasing awareness of change or more active engagement in dealing with the transition experience During the transition, there is a period of uncertainty marked with fluctuation, continuous change, disruption in reality and possible occurrence of symptoms related to the transition and this period may include a number of critical points (Meleis et al., 2000).

Thus, in the UMP for post-mastectomy women in Vietnam, the critical point for implementing the program was 3 days before surgery. At this time, the women incur uncertainty because of the lack of information and knowledge about mastectomy, and the reluctance to communicate with healthcare providers and family members to get help. The second critical point was 3 days post-surgery when the women saw the change of their body for the first time after surgery, and they might perceive a negative body image. That's also why reducing negative body image concerns in day 3 post-mastectomy was set in the program. On day 3 post surgery, physical exercises were also very important to the recovery of physical function in women undergoing mastectomy. However, at this point, only basic physical activities such as standing up, walking or doing private activities were required. Whereas the movements of hands and elbows were allowed immediately after surgery (Chung et

al., 2013; Groef et al., 2015), most movements involving the raising of the arms or stretching of the shoulder were discouraged because they increased the number of liquid excretion which prolonged the hospitalization time. The third critical point post-mastectomy was the day before discharge. At day 7, the participants practiced Qigong to relax and recharge energy as well as reducing mastectomy complications. The fourth critical point was at home when the participants took care of themselves. The disruption between their expectation and reality made it difficult for them to manage symptoms and routine life at home. Some women were afraid of doing things because of the pain, stiffness of the shoulder, fatigue or sleeplessness, while others isolated themselves, developed psychological problems and incurred a reduction in their quality of life. In most of critical points, nurses played an important role in engaging and supporting women with knowledge and skill, as well as connecting and motivating them to help them reach the desired outcomes (Meleis et al., 2000).

A summary of the framework of Uncertainty Management Program (UMP) is presented in figure 2

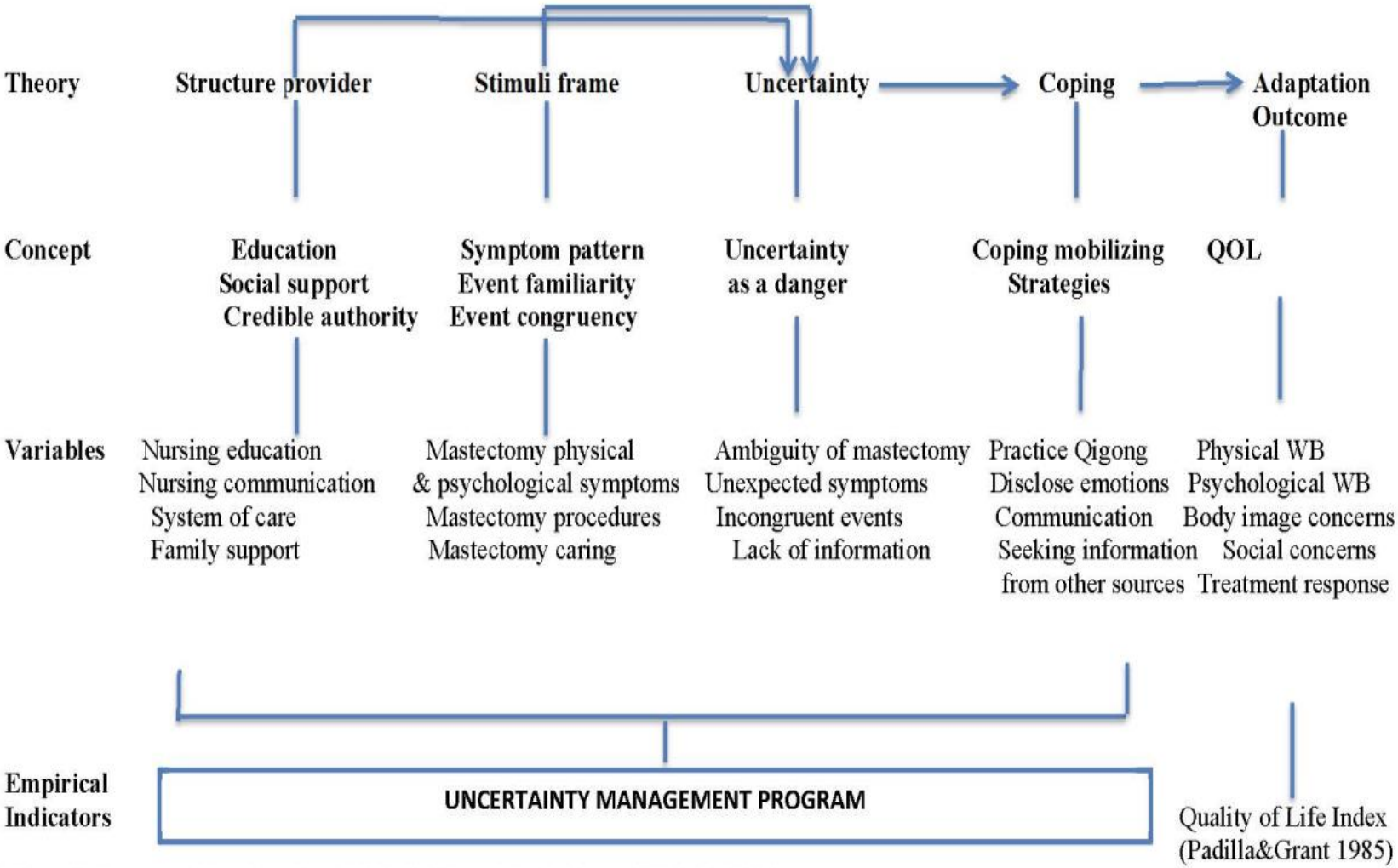

Figure 1: Theory subtraction from Mishel's Uncertainty Theory (Mishel, 1988)

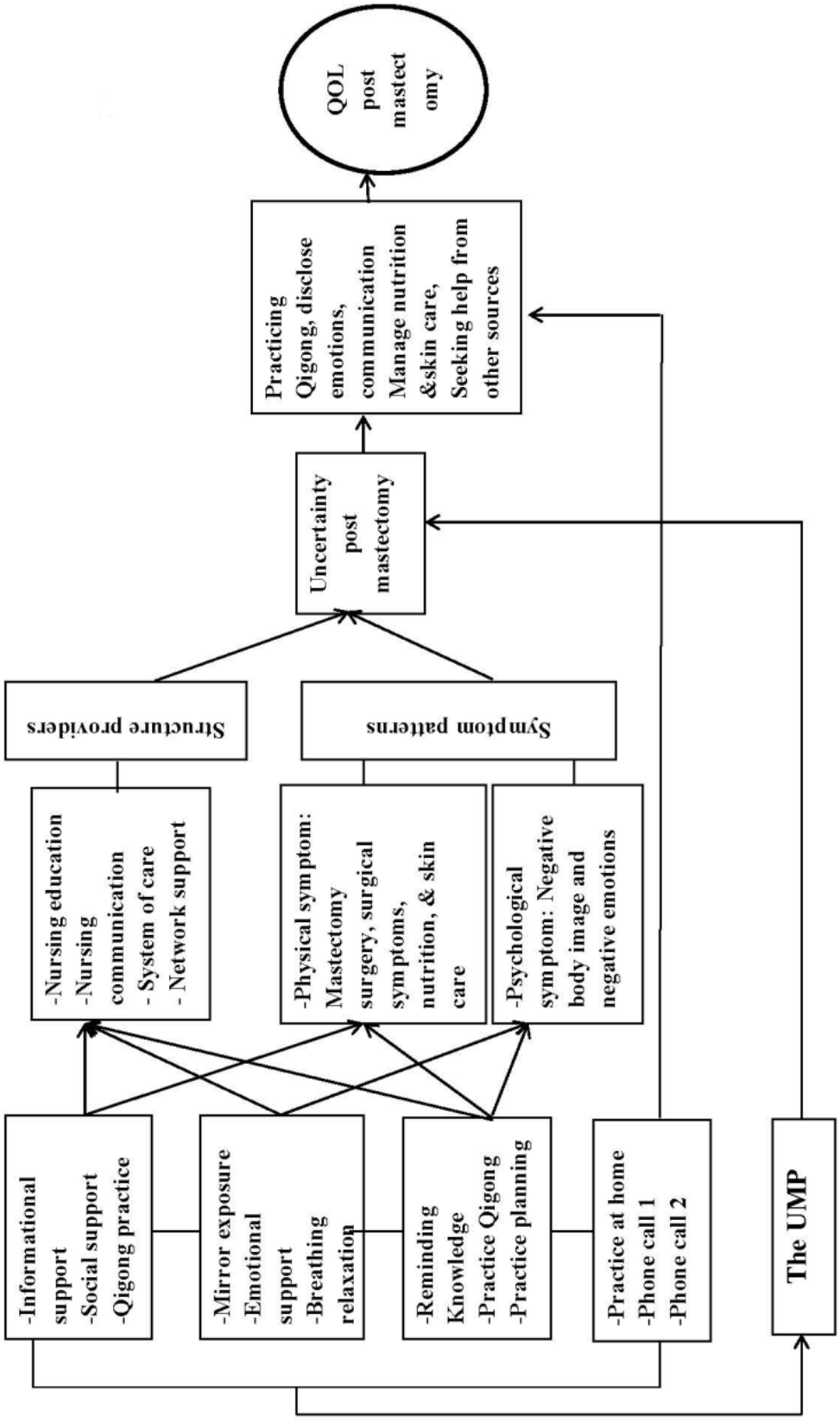

Figure 2: The framework of Uncertainty Management Program

Rationales

According to the Uncertainty in Illness Theory, uncertainty affects quality of life through the effect of stimuli frame and the structure providers. The UIT has been tested in women with breast cancer and QOL was measured as the outcome; therefore, it proposed the strong relationship between uncertainty and quality of life (Clayton et al., 2006; Detprapon et al., 2009; Somjawong, 2010). According to evidences from literature review, the rationales of the UMP are presented as follows:

Informational support has positive effects on physical symptoms and psychological symptoms, which as a result reduces uncertainty of symptoms post-mastectomy and promote QOL (Hong, 2000; Hsu et al., 2010).

Emotional support affects the psychological symptoms including negative body image and negative emotions, thus reducing post mastectomy uncertainty and increase QOL (Liao et al., 2013; Yoo et al., 2014)

Social support provides women after mastectomy with the knowledge and skills to enhance their social contact, communication with nurses, doctors and family members; therefore, uncertainty is reduced and QOL is enhanced (Salonen et al., 2013). Social support also aids in adjusting women's negative body image in order to reduce uncertainty (Kim et al., 2016).

Qigong is effective on both physical and psychological symptoms post-mastectomy thus definitely reducing uncertainty and improving QOL (Markdump, 2014; Reanrhom & Thanasilp, 2014)

Looking at oneself in the mirror is considered as an effective method to reduce negative body image, a psychological symptom post-mastectomy, hence it helps reduce uncertainty (Luethcke, McDaniel, & Becker, 2011)

Communication between nurses, doctors, family members, and women undergoing mastectomy is a practical structure provider's support that can reduce uncertainty. Therefore providing information about the role of nurses, doctors and skills to communicate with them helps the post-mastectomy women achieve more effective communication with healthcare providers and fulfill more needs (Clayton et al., 2006)

Reviewing knowledge and setting up practice plan at home encourage and provide women a critical method to practice by themselves. Phone calls are utilized to maintain support and contact between nurses and post-mastectomy women after their discharge.

The participants' home practice involves the coping mobilizing strategies. According to Mishel's instruction (1988), when post-mastectomy women were certain about their condition, they could make their own coping strategies to manage the illness events and improve their QOL.

Presented above are the rationales that support the effectiveness of Uncertainty Management Program; therefore, the post-mastectomy women who received this program were expected to have a higher quality of life than those who only received routine care.

Hypothesis

Post-mastectomy women who were in the experimental group receiving the Uncertainty Management Program, would have a higher score of quality of life compared to the control group who received only routine care at 3-weeks postmastectomy.

Operational definitions

Quality of life (QOL) is defined as the perception of one's lived experience with mastectomy surgery and comprises five dimensions, namely physical well-being, psychological well-being, social concerns, body image concerns, and diagnosis/treatment response (Padilla & Grant, 1985a). Based on Padilla and Grant's model and supported by evidence congruent with post-mastectomy population, empirical indicators of QOL post-mastectomy are as follows: Physical well-being includes one's strength, tiredness, ability to work, current health, self-perceived usefulness, and food amount. Psychological well-being is indicated by happiness, satisfaction of life, fun, eating pleasure, and sleep. Body image concerns involve the ability to look at the changes of the body, perception of femininity, adjustment to live with body changes, fear of scar and worry about the future (of living without a breast). Social concerns include family and friend rejection, family and friend contact, and privacy need. Treatment response related to surgery is defined as the ability to have sufficient nutrition (food amount), weight, severity of pain, frequency of pain, arm edema, shoulder movement (when raising hands), sensitivity of the absence of breast. The instrument used to measure QOL is the Vietnamese version of Quality of Life Index (QOLI_V) modified from that of Padilla and Grant's (1985)

Uncertainty is defined as the inability to determine the meaning of an illness-related event, and this occurs when an individual is unable to predict the outcomes accurately (Mishel, 1988). Uncertainty is characterized by four underlying factors: (1) ambiguity concerning mastectomy surgery, (2) complexity of symptoms regarding mastectomy surgery and the system of care, (3) lack of information and skill of care

when transitioning from hospital to home, and (4) unpredictability of the result of treatment and prognosis.

The Uncertainty Management Program (UMP) is the nursing program developed on the basis of Uncertainty in Illness Theory (Mishel, 1988), the manual guideline of Physical exercise and Emotional support in cancer (Cancer Council Australia, 2013, 2014) and the program of Thai-style Qigong (Thanasilp, 2012) together with clinical evidences. The UMP had 6 phases including phase (1) Assessment of the post-mastectomy women's need, phase (2) Informational and social support, phase (3) Body image concerns and emotional support, phase (4) Prepare and set up plan at home, phase (5) Practicing at home, and phase (6) Evaluation program.

Routine care: is common nursing activities in the surgical oncology ward to prepare and instruct women before mastectomy and care for women post-mastectomy. These activities include information of preoperative procedures, documents and procedures before surgery, intervention for pain, wound care, drainage, recovery process, and physical exercises for women after mastectomy surgery.

CHAPTER II
LITERATURE REVIEW

This part customarily presents knowledge about quality of life and uncertainty concept in the post-mastectomy stage with the definitions, antecedents, consequences, instruments, and interventions. The Uncertainty in Illness theory provided the framework on which the Uncertainty Management Program was developed to reduce quality of life in post-mastectomy breast cancer women in the early stage of post mastectomy. Therefore, rationales of this theory are also presented in this chapter.

1. Post-mastectomy breast cancer women in Vietnam

Breast cancer incidence in Vietnam has increased very fast recently from the age-standardized rate of 24.5 per 100,000 in 2000 to 32.80 per 100,000 in 2007 (Vuong, Velasco-Garrido, Lai, & Busse, 2010). Latest reports estimated that there are 12,000 new cases of breast cancer each year with a mortality rate of 60% (Ha, 2015). It is also reported that Vietnam has been on top of the list of high incidence and low survival rate of breast cancer for 5 years among South Asian countries. The mortality rate in Vietnam is 0.44 (OR) with a higher rate indicating a lower rate of survival (PfizerFacts, 2008).

Community training, primary prevention, and health care policies for breast cancer disease in Vietnam are not up to standard. Firstly, most of breast cancer women in Vietnam have no money to access regular health check-up because there is no health insurance policy for the whole population of Vietnam. Poor people only go to the hospital when they have serious health problems. Secondly, mammography, an expensive medical test and the gold standard for diagnosis of breast cancer is only

available in central hospitals; thus, breast cancer women have limited chance of discovering the disease at health care centers in rural areas. Thirdly, knowledge about breast self-check, the easiest way to detect unusual signs in the breast, is still unfamiliar with Vietnamese women due to feelings of shame, social stigma or traditional taboo.

Most women having low income and living in rural areas ignored health check-ups because of the lack of money (Nguyen, Hood, & Belgrave, 2012), which is why over 70% of women with breast cancer in Vietnam were diagnosed later than stage II, resulting in a high risk of death, exacerbating and complicated treatment, longer time of treatment and higher treatment expense (Lan et al, 2013). Most Vietnamese breast cancer women were documented to be middle aged (40-50 years), at stage II diagnosis (>60%), married (>83%), having education level lower than high school (70%) and having mastectomy (78%). These are also the prognostic factors of the survival rate of breast cancer women in Viet Nam (Lan, Laohasiriwong, & Stewart, 2013). In clinical settings, there are 10-15 women receiving breast surgeries per day at Oncological hospitals, which demands a lot of effort and care from nurses and doctors (Reference?). Over all, breast cancer in Viet Nam has now become the burden to the health care system and the government.

Mastectomy is an aggressive surgical procedure for women with breast cancer , which brings both physical and psychological damage to women (Frost et al., 2000). With regard to physical functions, women who undergo mastectomy are faced with surgical side-effects such as pain (20%-30%), and seroma (10%-80%) (Vitug & Newman, 2007). One of the complications specific to mastectomy is lymphedema, although improvements in breast cancer treatment techniques and nursing system

have contributed to a decrease in the incidence of lymphedema. The development of lymphedema results in physical impairments including compromised function, diminished strength, fatigue, and pain in the affected arm (Taghian et al., 2014). The psychological problems post-mastectomy includes the problem of "femininity" which is linked to the issue of "desirability", something innate in the "feminine position" (Arroyo & Lopez, 2011). Negative perception of body image in mastectomy women is also a psychological problem which is experienced more often than in other surgical methods (Collins et al., 2011; Fang, Shu, & Chang, 2013; Sun et al., 2014). Negative body image has a significant impact on women's emotional well-being and interpersonal relationships (Arroyo & Lopez, 2011; Silva & Santos, 2010). Besides, body image is one of the psychological aspects of human well-being which contributes to quality of life (Shobhita & Sathiyaseelan, 2013; Falk Dahl et. al., 2010). However, during the treatment of breast cancer, physical and psychological symptoms change in different phases of the disease on various subscales, including those representing perceived health states, overall impact, medical interactions, physical function, role function, fatigue, pain, social function and health satisfaction (Frost et al., 2000).

In Vietnam, although breast conservation and immediate reconstruction have been applied for 10 years, only 10% of the women can receive immediate breast reconstruction or conservation, as compared to 70% in other developing countries (Vien, 2015). Evidence has proved that immediate reconstruction and breast reservation have better aesthetic effect than mastectomy alone. A study on women undergoing mastectomy in Vietnam shows a low score of quality of life post-mastectomy at 52.7 as based on EORTC-C30 and 35.2 based on EORTC- BR23

(Duong, 2015). Another study has pointed out that mastectomy also causes poorer quality of life than breast reconstruction (Thiep et al., 2008). The quality of life of women undergoing mastectomy in Vietnam focuses on the effects of symptom complications, body image, and psychological distress post-mastectomy. Symptoms occurring after surgery when women are discharged from hospital usually involve arms (43,3%), breasts (29,3%) and pain (39,3%) (Duong, 2015), among which lymphedema takes up 23-30% of those with lumpectomy (K Hosiptal Report, 2013). In Vietnam, 68% of breast cancer women receive radical mastectomy and approximately 75% express distress during hospitalization (Vo et al., 2011). Besides that, negative body image is one of the post-surgery psychological problems which occurs to 40% of women undergoing mastectomy (Vien, 2015). Literature review from other countries mentions that anxiety, distress or negative body image is one of the psychological problems that cause poorer quality of life post-mastectomy (Gold et al., 2016; Oh, 2000; Razdan et al., 2016).

As regards informational support and counseling for post-mastectomy women in Vietnam, 80% of post-mastectomy women want to have more informational support and over 90% of the information should be related to the prognosis, time, cost of treatment, and surgical types. On the other hand, self-care and family support account for 50% of post-mastectomy care concerns (Chau & Bang, 2014). Being well-informed and well-prepared before coping with many aspects related to physical, psychological, spiritual and social functions at home is very important to improve the quality of life post-mastectomy (Knobf, 2002). However, in breast surgical oncological wards, the intervention to promote better quality of life post-mastectomy

for women after discharge is still lacking. There is currently no nursing guideline or intervention that focuses on improving the quality of life of post mastectomy women.

2. Quality of life in post-mastectomy women

2.1 Quality of life definition

Quality of life (QOL) is a concept that has existed since early research. It can be understood as one single dimension or multifaceted dimension. The World Health Organization has defined QOL as "individuals' perceptions of their position in life in the context of the culture and value system in which they live and in relation to their goals, standards, and concerns" (WHO, 1997). However, this concept is too broad, which makes it suitable for social sciences research but not specifically tailored for research on most of the illnesses in the medical field. Another definition considers QOL not as a summation of the individual happiness-states of all members of a society, but as the obtaining of the necessary conditions for happiness throughout a society (Mccall, 1975). On the contrary, QOL is mostly used to indicate a person's sense of well-being that stems from satisfaction or dissatisfaction with aspects of life that are important to them. QOL is also defined by: (1) normal life, (2) happiness/satisfaction, (3) achievement of personal goals, (4) social utility, and (5) natural capacity (Ferrans, 1990). Later, the conceptual model of QOL was built taking into account the dimensions of QOL. Individuals are the only proper judge of their quality of life, because people differ in what they value; therefore, the resulting model identifies four domains of quality of life: health and functioning, psychological/spiritual, social and economic, and family (Ferrans, 1996). Padilla and Grant (1985) described quality of life in five dimensions including physical well-being, social concerns, body image concerns, psychological well-being, and diagnosis

or treatment response. Cella (1994) identified four dimensions which encompass physical well-being, functional well-being, emotional well-being, and social well-being.

In the nursing context and in relation to specific illnesses, the concept of quality of life, in fact, coincides with the concept of health-related quality of life. A concept analysis of nursing based on theoretical guidelines of Peplau's, Rogers', Leininger's, King's, and Parse's conceptualizations, quality of life is defined as a contextual, intangible, subjective perception of one's lived experience (Plummer & Molzahn, 2009).

In context of cancer, McCorkle and colleagues define quality of life as "functional capacity, symptoms (physical and psychological) and perceptions of health"(McCorkle et al., 1989). Quality of life in lung cancer analysis is the impact of the disease and/or treatment on the functional status, physical symptoms, affective state, and interpersonal relationships, as evaluated by the person with cancer (Cooley, 1998). Concept analysis of Urinary cancer illness defines characteristics of positive QOL which include a sense of control, self-worth, independence, and social engagements (Dugger, 2010).

In breast cancer, the concept of QOL describes the impact of breast cancer on the domains of physical, social, psychological and spiritual well-being (Ferrell et al., 1997). Another study on the QOL in women describes family relationships and family support as central to good QOL. Good family relationships may help cancer women enhance their sense of self and priorities, increase their spirituality and facilitate personal growth (Wong-Kim et al., 2005). In a qualitative approach, QOL concerns the meaning of cancer, spirituality and beliefs about the causes of breast

cancer, coping mechanisms, the impact of illness and changes in relationships (Jassim & Whitford, 2014).

2.2 Quality of life in post-mastectomy women

Literature reviews mainly suggest that mastectomy has much more effect on women's quality of life in the short-term period after surgery than in long-term survivors. Poor quality of life in female post-mastectomy breast cancer women occurs early when women receive the diagnosis result and mastectomy is indicated as treatment, and then it fluctuates during the primary treatment process

In the diagnosis stage, breast cancer women are usually concerned about the aspects of normal life, global quality of life, and emotional function (Montazeri et al., 2008). Another study focuses on the symptoms before breast surgery which are related to quality of life such as fatigue, pain, sleep disturbance, depression, physical and social functions (Denieffe, Cowman, & Gooney, 2014). Quality of life at the diagnosis stage of breast cancer is influenced in two major dimensions: physical and mental aspects (Karlsen et al., 2016).

For the surgical stage, from mastectomy time to 3 months after surgery, the quality of life change in terms of emotional function, physical function and role function (body image, sexuality, future perspective) (Montazeri et al., 2008). A study on 558 women at 1-month after mastectomy surgery, symptoms including muscle stiffness, breast sensitivity, aches and pains, tendency to take naps, and difficulty concentrating, were significantly associated with poor physical functioning and emotional well-being (Ganz et al., 2004). Another study on 335 women undergoing mastectomy that measures their anxiety, depression symptoms and QOL prior to surgery and after surgery has shown that higher levels of anxiety and depression

symptoms in mastectomy women were associated with increased fears of recurrence, hopelessness, uncertainty, loss of control, and a decrease in quality of life (Gold et al., 2016). Mood disturbance together with emotional disturbance or poor physical function at 1-month post mastectomy are also the important aspects of poor quality of life in the surgical stage. Moreover, post-mastectomy women have significantly higher altered appearance distress (1.80; $p<0.05$) and poorer body image (51.69; $p<0.05$) post-surgery. Women who have altered appearance distress or poor body image are much more likely to experience psychosocial, physical, and functional problems than women who do not (Chang et al., 2014; Gaines, 2012). The lack of attractiveness, femininity and identity are also issues of sexuality in the relationship with their husbands or partners that impact their quality of life (Fobair et al., 2006).

For the next stage of primary treatment which involves chemotherapy or radiotherapy from 3 months to 12 -18 months, most of the dimensions of quality of life to be considered are emotional function, role function and global quality of life (Montazeri et al., 2008). Another study shows that psychological well-being and social well-being are two domains that score the lowest among domains of health-related quality of life at over 6-months post-mastectomy (Epplein et al., 2011). From a qualitative approach, three major themes related to the experiences of women living with breast cancer and undergoing chemotherapy have been identified: (1) the need for spouse and family support, the need to worship, and the need to receive and share information; (2) loss of the breast and hair; and (3) changes in normal life, changes in self-perception, changes in the perception of the value of health, and a greater appreciation for life (Cebeci, Yangin, & Tekeli, 2012). Another view shown in the study of 400 women, which compared quality of life of women receiving mastectomy

with reconstruction and those receiving mastectomy alone from post-surgery period until they finished treatment, is that mastectomy only brings about lower scores in three domains of quality of life which are physical well-being, psychological well-being and sexual well-being (Howes et al.)

Considering the survival stage, which ranges from 5 years to 24 years free of the disease, the quality of life in mastectomy women do not differ from that of breast reconstruction or reservation groups. It has been shown that at 24-months post-mastectomy, women who underwent lumpectomy or mastectomy with reconstruction had no better QOL than those who had mastectomy alone (Nissen et al., 2001). A survey of 1957 breast cancer survivors 5 years after diagnosis suggests a more positive QOL-related outcomes, yet no differences were seen between both surgical groups (Padilla, Mishel, & Grant, 1992a). However, the dimension of QOL in this stage mostly concentrates on psychological well-being (Epplein et al., 2011). In the long-term care of 337 women, the score for quality of life is 63.9 (95% CI). Among functional scales, social functioning scores the highest with a mean score of 77.5 (95% CI), whereas emotional functioning scores the lowest at 63.4 (95% CI). Survivors' care of women with breast cancer points out that they are satisfied with their quality of life after 5 years (Tasiemski, Kujawa, & Pokaczajło, 2009)

For women with reoccurrence or metastasis, a current study examines a range of concerns among distressed metastatic breast cancer cases, including physical and emotional distress, social functioning, and existential issues (Mosher et al., 2013). The author also mentioned that metastatic breast cancer and its treatment resulted in a number of quality-of-life concerns at first, including physical symptom burden, emotional distress, body image disturbance, and disrupted daily activities. After that,

social constraints on disclosure of cancer-related concerns may exacerbate the women distress. Finally, many women experienced a heightened awareness of life's brevity and searched for meaning in their cancer experience. Results highlight a range of quality-of-life concerns following a metastatic breast cancer diagnosis and suggest that addressing social constraints on cancer-related disclosure and the search for meaning may improve women' psychological adjustment.

Overall, from the literature review, QOL post-mastectomy includes mastectomy side effects such as arm symptoms, breast symptoms, physical well-being, negative body image, psychological well-being, social well-being and information/perspective of treatment process. Based on research evidences, QOL theoretically can be defined as encompassing five dimensions including physical well-being, social concerns, body image concerns, psychological well-being, and diagnosis/treatment response (Padilla & Grant, 1985a). According to Padilla and Grant, physical well-being is identified as the strength, fatigue, and the ability to work, health and self-perceived usefulness. Psychological well-being refers to happiness, satisfaction, fun, general QOL, pleasure and sleep. Body image concerns mean the ability to look at the changes of the body, the tendency to worry, the ability to adjust and to live with body changes. Social concerns consist of social rejection, social contact, or privacy need. Diagnosis/treatment response is related to surgical treatment symptom which is defined as the ability to have sufficient sexual activity, nutrition, weight, severity of symptoms like pain, nausea and vomiting (Padilla & Grant, 1985). QOL is measured by the Quality of Life Index (Padilla & Grant, 1985)

2.3 Antecedents of quality of life

From literature, it is known that the major antecedents of QOL are surgical symptoms, social support, uncertainty, therapy choices, age, race, income, and communication with nurses/physicians.

Symptoms caused by mastectomy result in physical impairments including compromised function, diminished strength, fatigue, and pain in the affected arm and lymphedema. Women suffering from lymphedema may have decreased self-confidence resulting from a distorted body image. Negative emotions reported by women with lymphedema include anxiety, frustration, sadness, anger, fear, and increased self-consciousness. Lymphedema secondary to breast cancer treatment remains a significant quality of life issue, with known consequences related to a woman's physical, psychological, and emotional well-being (Taghian et al., 2014). Severe complication of symptoms like symptoms cluster (fatigue, pain, sleep disturbances, depression) causes poorer functional status and QOL post-mastectomy (Dodd et al., 2010). Poorer sexuality and body image, anxiety, marital dissatisfaction, and fear of recurrence are factors that cause worsened QOL (Champion et al., 2014). Experiencing symptoms prior to surgery such as fatigue, depression, and negative emotions shows the significant impact on global quality of life with the correlation at 0.427, -0.542, 0.416 respectively (Denieffe et al., 2014).

Psychological factors before surgery also have an impact on quality of life after mastectomy. Systematic review suggests vulnerability, psychological distress and preoperative cancer distress as significant negative predictors of quality of life and body image post bilateral mastectomy surgery (Razdan et al., 2016). Women who had undergone a mastectomy in Mashhad, Iran, opposed that the mood state was a

predictor of their QOL (r = –0.598; p < 0.001) (Tirgari et al., 2011). Perception of negative body image is also reported to impact quality of life in women with breast cancer (t=-.41) (Bagheri & Mazaheri, 2015)

Social support directly improve QOL within 6 months (OR, 1.80; 95% CI) in health and functioning scores (OR,2.18; 95% CI) (Salonen et al., 2013). Another study mentioned that women newly diagnosed with breast cancer reported significantly poorer QOL in subscales related to pain, physical functioning, health and vitality. At 3-year follow-up, QOL improved in most domains to the levels equal with that in pre-diagnosis stage. Levels of social support remained stable across time (Leung et al., 2014).

Besides that, social support indirectly affects QOL by the mediator of uncertainty. Correlations of these factors are strong and explained in many studies. Social support predicted 15.1% of QOL variance, and uncertainty predicted 10.4% of additional QOL variance. Together, these two variables predicted 20.5% of QOL variance (Sammarco & Konecny, 2008). In another study, uncertainty, social support and quality of life were considered direct effects (r =.418, p < .000), as well as uncertainty and quality of life (r=-.436, p<.000). Using stepwise multiple regression model, 17.3% the variance of quality of life was explained by perceived social support, and 10.7% by uncertainty. Together perceived social support and uncertainty significantly explained 27.2% of the variance of quality of life (Sammarco, 2001). Social support predicted 15.1% of QOL variance, and uncertainty predicted 10.4% of additional QOL variance. Together, these two variables predicted 20.5% of QOL variance in another study by Stavrou et al. (2009a).

From past evidences, uncertainty is reported to mediate the effects of social support on QOL. Besides, uncertainty, together with 2 other variables which were years of survival, and harm appraisal explained 21.8% variance of quality of life by hierarchical multiple regression (Wonghongkul et al., 2006). Uncertainty also mediated the effects of symptoms to quality of life because during treatment, most symptoms positively correlated with the level of uncertainty, whereas, in women who had completed treatment, only dyspnea, insomnia, and arm symptoms positively correlated with uncertainty (Kim et al., 2012). Overall, uncertainty affects QOL and uncertainty is also mediator of social support and symptoms on QOL.

Other factors related to individual characteristics such as, age, race, region or economic also influence QOL. Younger women reported depressive symptoms (P <.005), fatigue (P<.001), self-reported attention function (P<.001), and poorer sexual function (P<.001)(Champion et al., 2014). Low income, minor race and ethnicity imply a lower QOL in physical and mental health (Maly et al., 2015; Morrow et al., 2014). Rural areas residents are only different in physical well-being in the QOL compared to urban residents (DiSipio et al., 2010). Women who are younger, married, unemployed, highly educated, religious, with higher monthly household income or with greater than one year elapsed time since diagnosis, had higher QOL (Chae & Seo, 2010). Therapy choices or communication between post-mastectomy women and physicians also influence QOL (Lee et al., 2013; Maly et al., 2015).

In summary, the factors that are most related to quality of life in breast cancer women during post-mastectomy stage are symptom severity or symptoms cluster, preoperative distress, mood state, and negative body image of women. However, social support, symptoms, and uncertainty are three main factors that have an impact

on quality of life over time since diagnosis until primary treatment is finished. For those who survive for more than 5 years, QOL is stable, and symptoms and social support do not play an important role in promoting QOL. That means most of the predictors' effects on QOL are most focused at surgical time and follow-up adjuvant therapies. Among these factors, uncertainty is a mediator of social support and symptoms on QOL. Therefore, uncertainty might be considered as the main predictor of quality of life in female post-mastectomy breast cancer women.

2.4 Consequences of quality of life

Consequences of QOL are the mortality and survival time. Survival time, which is defined as the length of time a terminally ill person remains alive, was the only variable that emerged as a possible QOL consequence (Ganz, Lee, & Siau, 1991). Women with poor quality of life post-mastectomy had a higher rate of mortality and recurrence of breast cancer (Coates et al., 2000; Mols et al., 2005)

2.5 Instruments to measure quality of life

With the purpose of measuring QOL after mastectomy, most of the instruments measure the whole dimensions in the concept of QOL as considered below.

European Organization for Research and Treatment of Cancer QOL Breast Cancer Specific Version (EORTC QLQ-BR 23) (Sprangers et al., 1996) was designed to measure QOL in the breast cancer population at various stages and in post-mastectomy women with differing modalities. It consists of five domains with 23 items: Therapy side effects, arm symptoms, breast symptoms, body image, sexual

functioning. Reliabilities ranged from .70 to .91. It was used to assess quality of life of female post-mastectomy breast cancer women in Vietnam (Duong, 2015)

European Organization for Research and Treatment of Cancer QOL Cancer Specific Version (EORTC QLQ-C30) (Aaronson et al., 1993):a cancer-specific questionnaire designed to measure QOL in the cancer population. It combines nine domains with 30 items: Physical function, role function, cognitive function, emotional function, social function, fatigue, pain, nausea and vomiting, global health status and quality of life. A four-point Likert scale ranging from 1 (Not at all) to 4 (Very much) or 1 (Very poor) to 4 (Excellent) is used to measure the quality of life during the past week. The time to answer the 30-items self-administered questionnaire was limited to 10 minutes. Reliabilities ranged from .69 to .90. It was used to measure quality of life of breast cancer women during the post-mastectomy stage (Rahman et al., 2014; Sun et al., 2014)

Functional Assessment of Cancer Therapy (FACT) (Brady et al., 1997). This instrument is specific to post-mastectomy breast cancer women with six domains: Physical well-being, social/family well-being, emotional well-being, functional well-being, relationship with doctor, additional concerns. A five-point Likert scale ranging from 0 (Not at all) to 4 (Very much) is used to measure quality of life during the past week. It has 37 items, which require more time to answer and might need support from the interviewer or the administrator. It takes approximately 25 minutes to finish. The Internal consistency was 0.90. It measures QOL in breast cancer women in the survival stage (So et al., 2014)

Satisfaction with Life Domains Scale for Breast Cancer (SLDS-BC) (Spagnola et al., 2003**).** This instrument was developed to measure satisfaction with

life among breast cancer women by five domains with 32 items: Social functioning, appearance, physical functioning, communication with medical providers, spirituality, using a seven-point Likert scale ranging from 1 “delighted” to 7 “very unhappy”. It was estimated to be completed in 20 minutes. Reliabilities ranged from 0.90 to 0.93. It was used to measure life satisfaction of breast cancer women in the survival period (Matthews et al., 2002)

Medical Outcome Short Form Health Survey (SF-36) (Ware, Snow, & Konsinski., 1993) was developed to assess health-related QOL by eight domains with 36 items including: Physical functioning, role limitations due to physical health, role limitations due to emotional problems, energy/fatigue, emotional well-being, social functioning, bodily pain, and health. It was self-administered in 5 minutes. Reliability ranged from 0.74 to 0.98. It was used to measure QOL in breast cancer survival stage (Leung et al., 2014; Maly et al., 2015)

Quality of Life Index (**QLI**) developed by (Padilla &Grant, 1985) specific to colostomy women with five domains: Physical well-being, psychological well-being, body image, diagnosis/treatment and social concerns. The questionnaire was built with the self-rating by indicating on the line from not at all to a great deal or completely during the past week. It had 23 items and was estimated to be completed in 10 minutes. This was a narrow span considering the use of a 0-100mm linear analog-response scale. The score was measured by the exact number indicated on the linear. Higher score means higher QOL. The internal consistency of each sub score ranged from 0.65 to .085. It was used for the cancer population (Hanucharurnkul, 1989) and the result of summary score for QOL ranges from 62 to 84 in individual-

item scores in the study of many kinds of cancer (Padilla et al., 1992a; Padilla et al., 1992b)

Most of the existing effective instruments that measure quality of life for breast cancer women are all well-known instruments which have been used to examine QOL in many stages of breast cancer (Perry, Kowalski, & Chang, 2007). Among those instruments, FACT-B and EORTC-BR23 are specifically designed for women with breast cancer during primary treatment, post-surgery or chemotherapy. However, QOL-BR23 focuses on physical symptoms whereas FACT-B emphasizes emotional well-being (Nguyen et al., 2015). EORTC-QLQ30 and SLDS-BC or QOLI are suitable for QOL in general or during survival stage. Considering the dimensions of QOL in existing instruments, QLQ-BR23 has the dimension of Body image but lacks the dimension of social concerns while SLDS-BC has social concerns and appearance dimensions but does not totally discus psychological well-being. Other instruments mostly consider physical and spiritual dimensions of QOL. Interestingly, the QOLI of Padilla and Grant (1983) was built based on the concept of QOL in diverse types of cancer having the same circumstance with breast cancer such as cervical cancer, colorectal cancer, and hysteric cancer post-surgery. The original QOLI of Padilla and Grant with 14 items have then been validated in many studies to measure QOL, which prove its validity and reliability (Rukholm, McGirr, & Potts, 1998). Later, the QOLI has been modified for colostomy population by adding 9 items that focus on some aspects of symptoms post-surgery. The dimensions of QOLI are closest to the definition of quality of life post-mastectomy, with five domains of physical well-being, psychological well-being, social concerns, body image concerns, and treatment/diagnosis response. The list of 23 self-administered items are based on

the visual line for the most concerns in the last 4 weeks is closest to the conditions of post-mastectomy women. Summarily, as colostomy the relation between colostomy and colorectal cancer is similar to with the aspects of colostomy and mastectomy being the same in colorectal and breast cancer, the QOLI of Padilla and Grant (1985) covers most of the aspects of the operational definition of quality of life post-mastectomy. Thus, this instrument was selected to measure QOL in breast cancer women during 1-3 weeks post mastectomy. In order to prove the reliability and validity of this instrument in the Vietnamese breast cancer group, the scale was modified by adding 3 more items which belong to the treatment response and body image dimension. Then it was sent to 5 experts who were consulted for the CVI and then translated into Vietnamese using Brislin's model. Psychometric properties of the Vietnamese version of Quality of Life Index Scale (QLI_V) were then established by Cronbach's alpha and CFI in 200 Vietnamese women with breast cancer at 1-3 weeks post-mastectomy.

The comparison and contrast of the instruments on time frame, domains and purpose of instruments and their reliability or validity record are summarized in table 1.

Table 1: Summary and Comparison of quality-of-life instruments

Name &authors	Purposes	Domains	Scales	Duration	Items	Type	Reliability	Validity
European Organization for Research and Treatment of Cancer QOL Breast Cancer Specific Version (EORTC QLQ-BR23) (Spranger.,1996)	Designed to measure QOL in the breast cancer population at various stages and in post-mastectomy women with differing modalities	Five domains: Therapy side effects; arm symptoms; breast symptoms; body image; sexual functioning	Four-point Likert scale ranging from 1 (Not at all) to 4 (Very much)	Past week	23	Self-report (10 minutes)	Reliabilities ranged from .70 to .91	Discriminant validity of mutually exclusive groups based on their initial performance status scores produced medium to large effect sizes ranging from .43 to 1.1
European Organization for Research and Treatment of Cancer QOL Cancer Specific Version (EORTC QLQ-C30) (Aronson et al.,1993)	Cancer-specific questionnaire designed to measure QOL in the cancer population	Nine domains: Physical; role, cognitive; emotional; social; fatigue; pain; nausea and vomiting; global health status and quality of life	Four-point Likert scale ranging from 1 (Not at all) to 4 (Very much); 1 (Very poor) to 4 (Excellent)	Past week	30	Self-administered (Under 10 minutes)	Reliabilities ranged from .69 to .90.(Carlsson & Hamrin, 1996) Test-retest reliabilities ranged from .63 to .87 (Hjermstad et al., 1995)	Correlation coefficient between the QLQ-C30 and the Profile of Mood States (POMS) was .56 (McLachlan, Devins, & Goodwin, 1998).

Name &authors	Purposes	Domains	Scales	Duration	Items	Type	Reliability	Validity
Functional Living Index – Cancer (FLIC) (Morrow, Lindke & Black., 1992)	Designed to assess the effect that cancer treatment and symptoms have on functional ability in all areas of life	Five domains: Physical functioning; mental functioning; social functioning; general health/well-being; gastrointestinal symptoms	Answer questions by placing a vertical line at the point in the scale that best represents their response point	Past two weeks; Past month; Today	22	Self-administered (Under 10 minutes)	Reliability ranged from .64 to .87.(Morrow, Lindke, & Black, 1992)	Correlation coefficients between FLIC and SF-36 ranged from .50 to .62 (Wilson, Hutson, & Vanstry, 2005)
Life Satisfaction Questionnaire (LSQ) (Carlsson & Hamrin., 1996)	Measure one's general sense of satisfaction with life as it relates to school, relationships, leisure time, religious practices, and overall health, for women with breast cancer	Six domains: Quality of family relation; physical symptoms; socioeconomic situation; quality of daily activities; sickness impact; and quality of close friend relation	Seven-point Likert scale ranging from 1 (very much) to 7 (Not at all)	Past week	32	Self-report (estimated 20 minutes)	Reliabilities ranged from .62 to .92	Correlation coefficients between LSQ and EORTC QLQ-C30 were -.68 to .54

Name &authors	Purposes	Domains	Scales	Duration	Items	Type	Reliability	Validity
Medical Outcome Short Form Health Survey (SF-36) (Ware, Snow, & Konsinski., 1993)	Developed to assess health-related QOL	Eight domains: Physical functioning; role limitations due to physical health; role limitations due to emotional problems; energy/fatigue; emotional well-being; social functioning; bodily pain; health	Scaled using various scales	Unspecified	36	Self-administered (5 minutes)	Reliability ranged from .74 to .98 (Hays, Sherbourne, & Mazel, 1995)	Correlation coefficients between the SF-36 and the General health Questionnaire (GHQ-29) were -.35 to =.61 (correlations are negative because the two scales run in opposite directions) (Failde & Ramos, 2000)
Quality of Life Index (QL-Index) (Spitzer et al.,1981)	Designed to assess health outcomes of those with cancer and other chronic diseases	Five domains: Activity; daily living; health; support; outlook	Three-point Likert Scale	Past two weeks	5	Interviewer administered or self-administered (10 minutes)	Internal consistency of .78	Correlation coefficients ranged from .40 to .63 (32)
Satisfaction with Life Domains Scale for Breast Cancer (SLDS-BC) (Spagnola et al.,2003)	Developed to measure satisfaction with life among breast cancer women	Five domains: Social functioning; appearance; physical functioning; communication with medical providers; spirituality	Seven-point Likert-type scale ranging from 1 (A "delighted" face) to 7 (A "very unhappy" face	Unspecified	32	Self-report (20 minutes)	Reliabilities ranged from .90 to .93	Correlation coefficient between SLDS-BC and FACT-B was .59

Name &authors	Purposes	Domains	Scales	Duration	Items	Type	Reliability	Validity
World Health Organization Quality of Life – Brief Version (WHOQOL-BREF) (WHO., 1998)	Designed to examine domain level profiles assessing quality of life	Four domains: Physical health; psychological; social relationships environment	Five-point Likert scale with varying anchors	Past two weeks	26	Self-administered (estimated 15-20 minutes)	Reliability ranged from .66 to .84. Similar alphas have been shown for test-retest reliability ranging from .66 to .87	Correlation coefficients between the WHOQOL-BREF and SF-36 ranged from .36 to .78 (da Silva Lima et al., 2005)
Quality of Life Index (Padilla&Grant., 1985)	Designed to examine quality of life of colostomy women	Five domains: Physical concerns Psychological concern, Social concern, Body image concerns, Treatments responses	10-point analog scale. Women answer the questions by placing a vertical line at the point in the scale that best represents their response	Past 1 month	23	Self-administered 10 minutes	Reliability Ranged from 0.65 to .085	

2.6 Intervention for Quality of Life

The interventions improving QOL are documented to involve informational, emotional, social support, physical exercises, Qigong and some relaxation therapies. However, different studies use different definitions of QOL, with different implementation methods for different stages of breast cancer treatment and there has been no intervention that considers QOL at the early stage of post mastectomy. It can be assumed that dimensions of QOL in post mastectomy stage differ from other major events of breast cancer and there was no intervention or program perfect for women in all different stages of this illness (Forst et al., 2000). Among these experimental studies, some considered QOL as a single concept, whereas others viewed QOL as a multi-dimensional concept. Therefore, the interventions selected depended on different objectives of studies. In summary, it is required that there are interventions that improve QOL by focusing on sub-dimensions of QOL which include physical well-being, psychological well-being, social support, body image concerns and symptoms post mastectomy.

Interventions that improved physical well-being in breast cancer post mastectomy women were physical exercises and Qigong practice. Although there have been many different views about the effects of exercises on the spreading of the tumor or cancer cells, the exercises in many randomized control trials have proved to be effective in reducing lymphedema post-mastectomy (Bicego et al., 2006). As regards the physical and symptom concerns, systematic review suggested that physical self-management had an effect on physical functioning, emotional and/or social wellbeing for women after 4 weeks or 6 weeks after surgery (Van Dijck et al., 2016). The physical exercises to improve muscle relaxation and normal movement of

arms and shoulder which are mostly used in practice and especially in Vietnam is the nine-step practice developed by the Cancer Council Australia in 2014 manual guideline, the thirteenth edition. The practice includes 9 steps of (A) Shoulder roll, (B) Elbow stretch, (C) Wrist exercises, (D) Hand squeeze, (E) Arm stretch, (F) Arm lift, (G) Hand on head, (H) Hand behind neck, (I) Wall crawl from easy to more difficult acts and this practice concerns the ability and strength of the post-mastectomy women. The steps A, B, C, D in this exercise can be applied at day 1 post mastectomy on the bed and later at day 3 when the women can sit down and move as normal. The women practice step E, F, G, H, and I after 7 days post mastectomy as recommended by systematic review (Chung et al., 2013; Groef et al., 2015). The women practice this regularly to reduce the short term and long term effect of breast and arm symptoms (Cancer Council Australia, 2014)

Another method of managing the physical symptoms for post-mastectomy breast cancer that has been studied for a long time is Qigong. Qigong is a mind-body integrative exercise from a traditional Chinese method focusing on relaxation, deep breathing, and coordinated movements. This method incredibly brings positive changes to lymphedema circumstances and blood flow in breast cancer women in just one section of 6 minutes (Fong et al., 2014), reduces pain after surgery (Lee et al., 2009b) and promote recovery after surgery (Lin, 2012). Qigong also has an effect on shoulder movement and physical ability of post mastectomy women after 4 weeks (Markdump, 2014). It also improves quality of life post-mastectomy in just 2 weeks compared to the conventional physiotherapy management (Naik, Patil, & AR.Pandya, 2016). Moreover, Qigong reduces fatigue and anxiety for women in chemotherapy/radiotherapy (Lee et al., 2006; Reanrhom & Thanasilp, 2014).

Dramatically, Qigong has shown an effect on managing physical and psychological symptom post mastectomy in a short time (Oh et al., 2012).

Psychological well-being post mastectomy is reduced by relaxation skills with methods to control and reduce emotional distress and anxiety. The mindfulness-based therapy is one method reported to manage psychological distress in the post-mastectomy stage (Zhang, Xu, Wang, & Wang, 2016). Some of the research on mindfulness-based therapy showed effectiveness on body image in breast cancer post mastectomy as well (Olyaie et al., 2015; Paterson, 2015). The skills of breathing relaxation also bring balance to the physical body, manage sleep disorder and reduce the uncertainty in emotion. The technique includes Equal Breathing, Abdominal Breathing and Progressive Relaxation Technique for beginners in 10 minutes. It helps calm the nervous system, increase focus, and reduce stress.

Negative body image post mastectomy is commonly experienced with uncomfortable feelings, perceived difficultly in accepting their body changes and difficulty in maintaining their female identity or defensiveness of women (Robson, 2000; Tanik, 2000). Beauty treatments provided at the hospital during hospitalization by beauty specialists included make-up, hairdressing one day post-mastectomy for women with breast cancer has an effect on improving body image (Quintard & Lakdja, 2008). Another intervention, which is recommended in Vietnamese clinical setting, is the program of looking in the mirror (Tam, 2001). This program has been done in other countries and showed positive effect on post mastectomy women (Freysteinson, 2009, 2011, 2012). Art therapy or hand writing and coloring is another method to reduce negative body image and psychological distress in the post-mastectomy stage (Thyme et al., 2009). However, literature proved that the

combination of cognitive dissonance-based approach and mirror exposure was the most effective method to reduce negative body image and negative emotions (Luethcke et al., 2011)

Interventions such as social support from nurses brought about changes in QOL 1 week after surgery whereas family or friends' support only make a difference in QOL later on (Salonen et al., 2013; Zabalegui et al., 2005). Social support is considered the most important pattern that all interventions for QOL have to include. Credible authority for post-mastectomy women includes health care providers, their partner or family members (Allinson & Dent, 2014; Leung et al., 2014). Nonetheless, an informational and emotional consulting program is effective in making improvement on psychological impact, a dimension of QOL right at discharge time post-mastectomy (Hsu et al., 2010). Informational and emotional support together in education nursing program change the cognition of post-mastectomy women, reducing uncertainty and psychological aspects of QOL (Hsu et al., 2010; Sajjad et al., 2016)

3. Uncertainty in post-mastectomy women

3.1 Definition of uncertainty

Uncertainty in illness is defined as the inability to determine the meaning of an illness-related event and occurs when an individual is unable to predict outcomes accurately (Mishel, 1988, Montgomery 2010). According to Theory of Uncertainty Illness, uncertainty is characterized in four forms: (1) ambiguity concerning the state of the illness, (2) complexity regarding treatment and system of care, (3) lack of information about the diagnosis and seriousness of the illness, and (4) unpredictability of the course of the disease and prognosis (Mishel, 1988).

On the other hand, an analysis that approaches the concept of uncertainty by Morse (2000) describes uncertainty as a person's perception of those situational attributes. Characteristics of the illness situation including ambiguity, vagueness, unpredictability, unfamiliarity, inconsistency, and lack of information underlying the process of uncertainty. Three attributes of the concept of uncertainty have been identified as probability, temporality, and perception. Loss of personal control is often erroneously equated with uncertainty according to concept analysis by McCormick (2002). However, loss of personal control is not synonymous with uncertainty for two reasons. First, one's ability to maintain perceived control, or the degree to which one feels loss of control, is a personality factor. Second, being out of control has an emotional component, but uncertainty is a neutral cognitive state (McCormick, 2002)

Qualitative approaches concerning breast cancer post mastectomy in many countries support that in women newly diagnosed with breast cancer, uncertainty focuses on experience of breast cancer illness, transition process and fatalistic view of breast cancer (Yusuf, Ab Hadi, Mahamood, Ahmad, & Keng, 2013). Women are also aware of living with breast cancer, such as their experiences in relation to emotional reactions, bodily physical changes, their female identity, meaningful activities and their social network (Landmark & Wahl, 2002).

Some women consider having a mastectomy but are uncertain due to the lack of information to understand routine breast screening; uncertainty about screen-detected ductal carcinoma in situ (DCIS) and its natural progression; uncertainty about whether a mastectomy is justified, information gaps and treatment decisions (Prinjha, Evans, Ziebland, & McPherson, 2011). While waiting for mastectomy, most women express concerns on how their breast cancer would influence their future, and

worries about disfigurement and reduced womanliness (Drageset, Lindstrom, Giske, & Underlid, 2011). In breast cancer survivors, particular sources of uncertainty include the inability to judge the meaning and significance of new or ongoing symptoms, as well as the presence of new late-emerging physical symptoms such as arm swelling (Kim, Lee, & Lee, 2012).

Five themes of uncertainty among women living with breast cancer were: (1) the vicissitude of emotions, (2) relying on support through relationships, (3) transitions: learning new ways of being in the world, (4) reflections of self in the world, and (5) gaining understanding: putting uncertainty into life's perspective (Nelson, 1996). Later uncertainty in breast cancer women was defined as a perceptual state that existed on a continuum and changed over time. Hilton (1994), depicting uncertainty as a process, said, "Uncertainty is a cognitive perceptual state that ranges from a feeling of just less than surety to vagueness; it changes over time and is accompanied by threatening and/or positive emotions." In addition, Mishel (1997) considered uncertainty a "neutral cognitive state" and, therefore, it should transcend emotions (Hilton, 2009).

In summary, the concept of uncertainty in breast cancer population was distinguished by Hilton (1994), however, the "process" or "cognitive perceptual state" in her definition is abstract and difficult to measure because the phenomenon of uncertainty in her study was explored by qualitative approach. It helps to understand about uncertainty, but it brings confusion concerning the determinant to evaluate it. In addition, Mishel, (1997) also explained uncertainty as a "neutral cognitive stage" which implies the same meaning as Hilton, (1994) and Mishel's defining attributes for uncertainty concept is clearly understood and measurable. Therefore, the uncertainty

concepts of Mishel, (1988) and Nelson (1996) explain the conditions of post-mastectomy women better.

3.2 Antecedents of uncertainty

In accordance with the concept synthesis, most of the antecedents of uncertainty in breast cancer focus on the primarily negative beliefs, values, and characteristics of the cancer situation that influence the uncertainty (Hilton, 2009). The major factor that affect uncertainty is anxiety, accounting for 63.3% of the uncertainty (Oh, 2000). Symptoms severity (Kim et al., 2012) social support (Somjawong, 2010), and mood sates (Warren, 2010) are also factors that predict uncertainty in the post-mastectomy stage. In the model of predicting uncertainty in breast cancer long term care, education accounts for 28% variance, symptoms take up 39% of variance and mood sate contributes to 16% of variance (Clayton et al., 2006).

3.3 Consequence of uncertainty

According to the concept analysis in breast cancer, the outcome of uncertainty management is the changes in attitude, confidence, and relationships, reappraisal and changes in beliefs, values, and goals (Hilton, 2009). From the literature, uncertainty in previous time accounted for nearly 70% of the variance of more functional and physical impairments of people over time (Garofalo et al., 2009). Functional or impairment of people is a dimension of quality of life. Evidences also supported that uncertainty together with perceived social support significantly affected quality of life, which accounted for 27.2% of the variance (Sammarco, 2001)

3.4 Instrument to measure uncertainty

The Mishel Uncertainty in Illness Scale' (MUIS) examines the impact of uncertainty in illness in breast cancer women (Hagen et al., 2015). Mean of the participants MUIS score was 90.1 (16.8). Confirmatory factor analysis confirmed validity of the whole instrument and its four subscales. The consistency of the instrument with a three-week interval was r = 0.91. Cronbach's alpha was 0.89 for the whole scale of 32 MUIS items and α = 0.58–0.86 for its four factors (Sajjadi et al., 2014).

3.5 The Uncertainty in Illness Theory (UIT) (Mishel,1988)

The theory of Uncertainty in Illness (Mishel, 1988) explained the nature of uncertainty. According to Mishel, (1988), uncertainty in illness is defined as the inability to arrive at understanding regarding the illness-related events. Sources of uncertainty are inconsistency in the patterns of symptoms, inconsistency between the expected and experienced illness-related events, and the unfamiliarity and complexity of treatments and events. Cognitive capacity refers to the ability of a person to process knowledge or information. Limited cognitive capacity will reduce the ability to perceive symptom patterns, event familiarity, and event congruence. Structure providers such as education, social support, and credible authorities are resources that are used to decrease uncertainty by assisting with the interpretation of the illness-related events. As a result of cognitive appraisal, uncertainty may be considered as a danger or as an opportunity. If uncertainty is perceived as a danger, coping strategies to control or decrease this uncertainty will occur. If uncertainty is perceived as an opportunity, then buffering coping strategies to maintain uncertainty will take place. Coping strategies are said to improve adaptation, the ability to return to the normal

life before the illness. According to Mishel (1990) individual's uncertainty was the basis of self-organization in which their view of life will be reformulated (Mishel, 1990). The level of uncertainty implies the adaptation response which will reform the life. Therefore, in this theory QOL is proposed as an adaptation outcome.

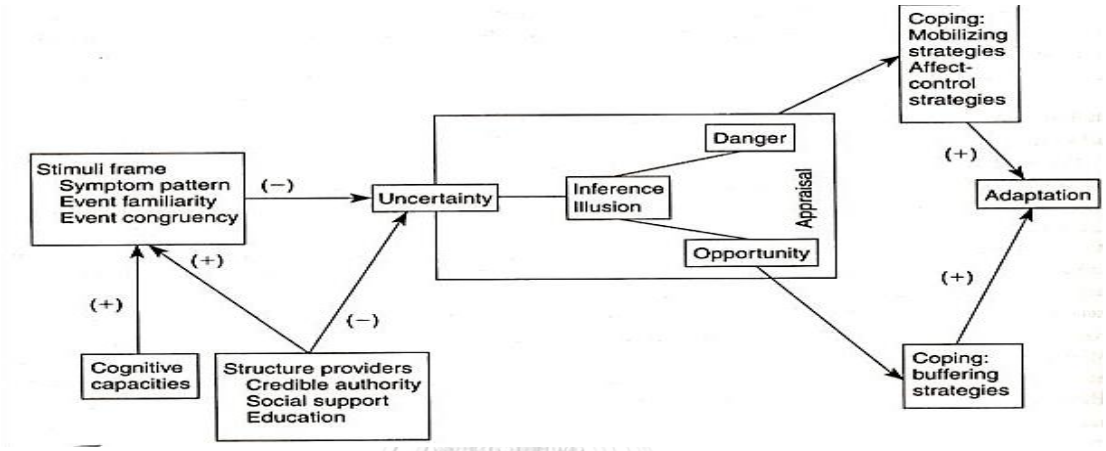

Figure 3 The theoretical framework of Uncertainty in Illness (Mishel, 1988)

Uncertainty can occur when the experienced stimuli are inconsistent, random, complex, unpredictable, and information is lacking (Mishel, 1988). A stimulate fame is recognized and classified, imparting meaning to the illness symptoms. Symptom pattern, one component of stimuli frame, refers to the degree to which symptoms are present with sufficient consistency to form a pattern or configuration. When symptoms form a pattern, less uncertainty exists, particularly less ambiguity about the state of the illness (Mishel & Braden, 1988). In the post mastectomy stage, most of the related symptoms include muscle stiffness, lymphedema, sensitivity, aches, fatigue, pain, and sleep disturbances which cause poorer functional status and QOL (Dodd et al., 2010). Inconsistent symptoms cannot be used to gauge reliability state of

the illness; thus, they generate uncertainty. Another psychological symptom of post mastectomy women is negative body image perception which influences quality of life as adaptation outcome (Bagheri & Mazaheri, 2015; Razdan et al., 2016). Accuracy of symptom perception is frequently limited because of perceptual and cognitive biases such as selective attention and emotional arousal. If a person is depressed or threatened by an illness, symptoms of actual or presumed illness interpreted to be more severe than they actually are. Also, a sense of helplessness surrounding the cause or persistence of symptoms may make it difficult to discern the seriousness of the physical state. Absence of salient symptoms with no guarantee of cure can generate more uncertainty than does the existence of symptoms (Mishel, Hostetter, King & Graham, 1984). Therefore, some invisible symptoms like psychological symptoms is also one of the stimulate frame of uncertainty.

When the meaning and components of the stimuli frame are understood, rather than ambiguous, women appraise illness-related events differently, reducing appraisals of threat and harm, and increasing appraisals of hope and uncertainty management opportunities, which ultimately improves quality of life (Mishel & Clayton, 2003; Wonghongkul et al., 2000). When women are unable to interpret the meaning of symptoms experienced, they are unable to determine a pattern of symptoms, generating more uncertainty. The changes which symptoms might bring into one's life may also generate increased uncertainty.

According to Mishel (1988), structure providers are the resources available to assist post-mastectomy women to interpret symptoms and illness related events. Resources such as education and credible sources of authority such as the health care provider, help women interpret what is happening, helping them to form a cognitive

schema and an accurate interpretation of symptoms (Mishel, 1988). Structure providers are said to consist of credible authority, education and social support. One of the most effective structure providers is social support (Mishel, 1997). Social support is defined as the health care provider support and family support. The health care provider can give information on the cause, intensity, and duration of symptoms, which enable women to develop a cognitive schema and attach meaning to symptoms in terms of their future impact. Without this input from the health care provider, the uncertainty in illness theory stipulates that the uncertainty surrounding symptoms will intensify.

Although interaction with health care providers has been reported to reduce uncertainty (Mishel, 1997), the nature of the communication between post-mastectomy women and provider needs more consideration.

As already mentioned, an illness event is, according to the Uncertainty in Illness theory, either appraised as an opportunity or a danger, and an opportunity appraisal leads to the use of buffering strategies as a coping method. Buffering strategies are important in supporting the uncertainty of the illness and blocking the input of new stimuli that can transform uncertainty into a danger. The strategies described are ignoring, avoidance, reordering of priorities and neutralizing (Mishel, 1988). An individual can manage communication to maintain fragile optimism, or reset priorities of lifestyle change (Mishel, 1988).

3.6 Intervention for Uncertainty

There are two types of interventions analyzed in literature to improve outcomes in post-mastectomy breast cancer women. One involves programs focusing on uncertainty as the significant factor to improve aspects of QOL and the other

includes interventions that have direct effect on the increase of QOL as a whole or in some separate dimensions.

The existing nursing programs focusing on Uncertainty Management have been established; however, they are applied mostly for breast cancer survivors group. Only one study mentioned the effect of uncertainty management for post-mastectomy group. It can be assumed that the content of previous programs concentrate on a different aspect of QOL in different stages of breast cancer treatment. Some uncertainty management programs, which combine the holistic caring for QOL as well as the separate interventions of nursing have been reviewed in detail.

In a randomized controlled design, Mishel and colleagues tested the efficacy of a theoretically based uncertainty management intervention delivered to older long-term breast cancer survivors. The sample included 509 recurrence-free women with a mean age of 64 years (S.D. = 8.9 years) who were 5–9 years after being treated for breast cancer. The intervention was conducted during four weekly telephone sessions. In each section, nurses guided cancer survivors in the use of audiotaped cognitive–behavioral strategies to manage uncertainty about recurrence, and a self-help manual designed to help women understand and manage long-term treatment side effects and other symptoms. Treatment outcome showed the effect of uncertainty management on the core concepts of uncertainty such as cognitive reframing, problem solving, cancer knowledge, social support satisfaction, and patient-provider communication, with data gathered at pre-intervention and 10-months afterward (Mishel et al., 2005)

Gil et al, 2006 also applied the same uncertainty program on another group of Older African American women and Caucasian. The study reported the use and helpfulness of the intervention components in the 244 women who were engaged in

the intervention. Findings indicated that the women used the intervention components regularly to deal with triggers of breast cancer recurrence and long-term treatment side effects, and most women found the strategies very helpful (Gil et al., 2006b)

Gemino and colleagues implemented the Uncertainty Management Intervention consisting of a scripted CD and a guide booklet supplemented by four scripted, 20-minute weekly training calls conducted by nurse interventionists to experimental participants. The control subjects, on the other hand, only received the four scripted, 20-minute weekly training calls. There were 313 female breast cancer women participating in this study and findings showed a significant difference in negative mood in the experimental group at 4-months to 8-months compared to the control group (Germino et al., 2013)

Sun Hong (2000) carried out a quasi-experimental study with 30 purposive Chinese women undergoing mastectomy divided into two groups: the experimental and control group. The intervention was informational, following the supported guidelines to reduce uncertainty. The result showed lower uncertainty in breast cancer at the day before mastectomy and the day before discharge in the experimental group compared to the control group (Hong, 2000)

In summary, almost all programs reducing uncertainty are based on Mishel's theoretical framework (1988), using MUIS to measure uncertainty in female post-mastectomy breast cancer women, and focusing on the cognitive, emotive, and social support combining with helpful media equipment such as video tape, CD, or the internet. Most of the uncertainty interventions implemented in cancer population and breast cancer have shown benefits. The existing knowledge reflects that uncertainty occurring in cancer group because of unexpected psychological effects. Thus, major

specific strategies used to reduce uncertainty are providing cancer knowledge, and coping skills. The cognitive and emotive support include calming self-talk to address triggers of uncertainty and intrusive thoughts, talking, and calling with nurses/ health care providers (Bailey et al., 2004; Germino et al., 2013). The knowledge of cancer disease is provided by the booklet, the guideline, or, the video tape. The skills to manage psychological effects are breathing relaxation and distraction to deal with emotional reactions to triggers of uncertainty, communication strategies to assist women more effectively in disclosing their concerns to those important to them (Gil et al., 2006a). Besides that, uncertainty programs on breast cancer provide knowledge and skills to reduce uncertainties of women with breast cancer post-mastectomy, dealing with long-term side effects such as hormonal changes that result in premature menopause with hot flashes, sexual problems, fertility issues, weight gain, loss of bone density, and mood alterations (Gil et al., 2006a).

4. Developing the Uncertainty Management Program for Post-Mastectomy Breast Cancer Women

The previous uncertainty management interventions that have been established in the breast cancer group promoted the cognitive reframing, the emotional support as well as the knowledge and skills to manage the long-term effect of breast cancer. However, in the post mastectomy group, uncertainty occurs because of two important factors, which are symptoms of mastectomy and social supports. Thus, the Uncertainty Management Program in post mastectomy group has to provide support in both knowledge and skill to manage physical and psychological symptoms in the short-term stage of post mastectomy, together with the concern in communication and contact with healthcare provider and family.

The Uncertainty Management Program for Post-Mastectomy Breast Cancer Women was built on the underpinning of Mishel's theoretical framework (1988). The program was composed of the informational support, emotional support, social support, and Qigong practice for post-mastectomy women. The program was developed based on references to the Uncertainty Intervention (Gil et al., 2006b), the manual guideline of Physical exercise and Emotional support in cancer (Cancer Council Australia, 2014) and the program of Thai-style Qigong (Thanasilp, 2012) together with clinical evidences.

The content of the UMP considered most aspects of post-mastectomy related symptoms, including physical and psychological symptoms, support of nurses, doctors and family, communication ability to reduce uncertainty in post mastectomy stage in order to enhance the quality of life post-mastectomy.

The first content in the UMP was informational support. For women undergoing mastectomy, most of the information is about the mastectomy, the prognosis of breast cancer, treatment schedule, cost of treatment, and effects of symptoms post mastectomy (Chau & Bang, 2014; Denieffe et al., 2014). Besides that, negative emotion was one of the most important factors occurring post-mastectomy because of the damaged physical body image (Bagheri & Mazaheri, 2015; Vien, 2015). Negative perception of the distorted body image after mastectomy was quite a serious problem (Chen, Liao, Chen, Chan, & Chen, 2012; Moreira & Canavarro, 2010). Therefore, providing information about the effects of mastectomy on body image and negative feelings expected to occur post mastectomy was important to help women be prepared for further psychological distress post mastectomy. The provided information on body image explained how the breast is cut off, how the incision is

made, what the incision looks like, how to take care of the scar or arm problem at the breast after surgery, post-surgery complications such as breast sensitivity, tingling, chronic pain, phantom pain, muscles scram, lymphedema or hand edema, how to reduce the breast and arms symptoms, how to absorb good nutrition to improve physical health, how women normally feel the first time they see their body without a breast, what to do to reduce the uncomfortable feelings, how to disclose their emotions to others, how the other people view mastectomy people, how to become more confident in front of others, how to deal with other relationships and works). Other aspects of informational support were the further treatment process, prognosis, cost, and length of treatment, source of contact info or websites, and other media channels to get help.

Moreover, anxiety and mood state cause negative influence to quality of life post-mastectomy (Tirgari et al., 2011). Therefore, the content of the intervention not only involved information but also encouraged disclosing and sharing negative emotions to improve comprehensive aspects of quality of life (Sajjad et al., 2016). The emotional support provided self-adjustment for post-mastectomy women to disclose their feelings by themselves using means of writing, expressive stickers or diary notes. Besides that, the negative body image could be reduced by the method of looking in the mirror when women see the scar of breast incision for the first time. Nurses and post-mastectomy women discussed together the way they wanted to see their body and during that time, nurses helped them express their emotions when they looked at their body's changes.

Another aspect of social support was communication. Communication was the way how women undergoing mastectomy received or transferred the information or

emotions to nurses, doctors or family members post mastectomy. Their efforts and skills were improved to communicate with health care provider and their family to get sufficient support care. This part pointed out 10 steps for the post-mastectomy women to improve relationships with doctors, nurses and other healthcare providers. Behaviors to enhance communication were instructed, such as using clear, concise statements, maintaining eye contact, and expressing thoughts and opinions openly. The role and duty of doctors, nurses, and nursing assistants were clearly defined in the section so that the women knew whom they need to ask. In addition, a section on talking to the doctors about medical problems was finally added. Many methods were provided to make communication easier including being specific about what things to ask, questions to ask, or writing down instructions, and communicating their concerns or fears. The women were asked to record all of their concerns about symptoms, medications and other issues to bring with them when they met the health care provider. Communication between post-mastectomy women and their family member was also mentioned and encouraged through many skills to promote sharing and caring for each other.

The informational and emotional support as well as communication were implemented in section 1, three days before mastectomy, because it was the most sensitive time for women undergoing mastectomy to adapt with most of the symptoms and emotions occurring post mastectomy (Van Dijck et al., 2016)(Knobf, 2002).

The relaxation skill was one of the ways to control and reduce emotional distress or anxiety. The mindfulness based therapy was one method to manage psychological distress in the post-mastectomy stage (Zhang, Xu, Wang, & Wang, 2016). Some of the research on mindfulness based therapy showed effectiveness on

body image in breast cancer post mastectomy as well (Olyaie et al., 2015; Paterson, 2015). The skill of breathing relaxation can also bring balance to the physical body, manage sleep difficulty and reduce the uncertainty in emotion. The technique includes Equal Breathing, Abdominal Breathing and Progressive Relaxation Technique for beginners in 10 minutes. It helps calm the nervous system, increase focus, and reduce stress.

Negative body image post-mastectomy is commonly experienced with uncomfortable feelings, perceiving difficultly in accepting one's body changes and difficulty in maintaining their female identity or defensive of women (Robson, 2000; Tanik, 2000). Beauty treatments provided at the hospital during hospitalization by beauty specialists. including make-up, hairdressing one day post-surgery proved to be effective in improving body image (Quintard & Lakdja, 2008). The mirror exposure was the most convenient and beneficial to reducing negative body image occurring post-mastectomy.

The phone calls to review and to support post-mastectomy women in managing their life at home helped shorten the distance between nurses and post-mastectomy women together with family member. Besides, the meaning of carrying on for post-mastectomy women's effort in coping with illness supported emotional expression if needed (Clayton et al., 2006; Knobf, 2002). The first phone call was made 3 weeks after discharge from hospital to remind them about self-management and practicing skills. The researcher gave consultation to post-mastectomy women on how to deal with unexpected problems happening at home and what they expected. The second call was made after 6 weeks asking for what achievement they got, what difficulties they met, how they solved the problem, and encouraging them to continue

self-management program, asking how they adapted to the daily life, how they felt when going back to work, and, if they felt worried about further treatment, what they needed to help them prepare well for future therapy.

Uncertainty management was the intervention that impacted the cognitive behavior post-mastectomy. Therefore, the suitable time to measure the effect of cognitive behavior or education program on quality of life is 4-6 weeks post-surgery (Sajjad et al., 2016; Van Dijck et al., 2016). However, in post mastectomy stage, uncertainty reduces at 1-week after surgery (Hong, 2000) and physical symptoms can reduce with Qigong at 4-weeks post-mastectomy (Markdump, 2014). Therefore, the evaluation of the UMP was set at 3-weeks post-mastectomy. In Vietnam, 3-weeks post mastectomy is the first follow-up and is when post-mastectomy women receive the result of pathology tests in breast cancer so that nurses and doctors appraised the women's health and decided further treatment. It was also a good time to measure women's quality of life post-mastectomy. The procedure of how to implement the UMP is presented in chapter 3 in this study

CHAPTER III
RESEARCH METHODOLOGY

This chapter gives information about the research process, including the research design, population and sampling method, research instruments, protection of the human rights, data collection, and data analysis process.

1. Research Design

This study was a quasi-experimental research, using a post-test only control group design. The treatment was the Uncertainty Management Program (UMP) and the outcome measured is quality of life.

X O_1

O_2

O_1: Measuring the QOL in the experimental group at 3-weeks after mastectomy

O_2: Measuring the QOL in the control group at 3-weeks after mastectomy

X: The Uncertainty Management Program (UMP)

The study was conducted at The Oncology Hospital, the biggest oncology center in Ho Chi Minh City, the South of Vietnam. This hospital provided treatment for more than 80% of breast cancer women in the Southern part of the country every year (Thinh, 2015). After receiving the IRB approval of Research Ethical Board in Vietnam and Research Board of the Oncology Hospital, the researcher met with women expected to undergo mastectomy at the Breast Surgical Oncological Ward of Oncology Hospital by the referral of head nurses in the surgical oncology ward.

2. Population and Sample

2.1 Population of the study

Vietnamese women, aged 30-60 years, diagnosed with breast cancer, scheduled to undergo mastectomy and admitted to the Breast Surgical Oncology Ward of the Oncology Hospital were the population of this study.

2.2 Sample of the study

The study involved women with breast cancer admitted to the Surgical Oncology Ward for breast incision using the simple and radical mastectomy method from April 2017 to June 2017. They were women aged 30 to 60 years, who were admitted to hospital 3 days before mastectomy and satisfying the following criteria:

Inclusion criteria

1) Are diagnosed with breast cancer stage Ib, IIa, IIb following TNM classification.

2) Do not have other chronic illnesses such as hypertension, diabetes, and cardiovascular disease

3) Can read and write Vietnamese

4) Volunteer to participate in the program.

Exclusion criteria

1) Abnormal recovery process at day 3 post mastectomy due to unstable vital sign, hypotension, hemorrhaging, increasing excrete liquid, wound infection.

2) Length of post-mastectomy stay exceeds 7 days

3) Serious distress after mastectomy

4) Decide to undergo immediate reconstruction

5) Fail to complete the process of UMP

2.2.1 Sample size

In experimental studies, level of significance is usually set with p value <0.05, standard power of at least 0.8, and small effect size (Cohen, 1988). Previous experimental studies showed that the effect size of Uncertainty Management Intervention on breast cancer group was around 0.4 to 0.53 (Gil et al., 2006b; Mishel et al., 2005). In this study, to achieve the independent t-test power analysis of 80%, alpha 0.05 and medium effect size of 0.5 using Gpower program, a sample size of 51 for each group was required (Erdfelder, Faul, & Buchner, 1996). The missing of data which might occur because of severe complications post-surgery is expected at 8-12 %, (Hiep, 2010; Vo et al., 2011) while the accepted attrition rate is usually around 10%. In this study, the expected attrition rate was 7 cases. Therefore, the total estimated sample size was 116 subjects, with 58 for each group. In reality, the participation number was 119 subjects and the attrition rate was 4 subjects (3.36%).

2.2.2 Sampling technique

Sampling method

Participants in this study were recruited using a convenience sampling technique in which women with breast cancer were assigned the day for mastectomy according to the hospital's schedule. This sampling technique was an effective way to enroll participants simultaneously.

Group assignment

As the Surgical Oncology Ward at Ho Chi Minh City Oncology Hospital has big rooms and each room can accommodate 20 people, the researcher assigned intact

groups of subjects to the experimental and control groups in order to reduce the contamination bias due to treatment diffusion. Those who satisfied the inclusion criteria and had mastectomy in week 1, 3 or 5 were assigned to the control group, while those who satisfied the inclusion criteria and had mastectomy in week 2, 4 or 6 were assigned to the experimental group.

The total number of women that participated in this study was 119, with 60 cases for the control group and 59 cases for the experimental group. However, during the program, based on some exclusion criteria, 4 subjects dropped out of the study, thus leaving us with only 115 subjects, among which 58 were in the control group and 57 others were in the experimental group.

3. Protection of Human Rights

This study was approved by the IRB in Viet Nam, the Board of Ethics in Biomedical Research in the Medicine and Pharmacy University and the Ethical Board of the Oncology Hospital. After the research proposal was approved by the PhD committee in Chulalongkorn University, the researcher submitted the document to the Board of Ethics in Biomedical Research (BEBR) at the University of Medicine and Pharmacy in Ho Chi Minh City, an agent belonging directly to the Ministry of Health in Vietnam. After receiving the approval of the BEBR, the researcher went on to contact the Research Ethical Board of Oncology Hospital (REBOH) to ask for permission to conduct research at the hospital. Two project defense presentations were given at the BEBR and REBOH. The processing by the IRB took around 3 months from December 2016 to February 2017. Then, the meeting between the researcher, the Dean, and the Head nurses of the Surgical Oncology Ward took place and the researcher presented the procedure of the study. The researcher had to sign the

consent form of the Surgical Oncology Ward confirming that the study's result would be submitted to the Oncology Hospital after the researcher finished the paper. Finally, the Head of the Surgical Oncology Ward introduced the researcher and the study to all of the staff at the Ward.

The information and consent were then explained to the participants by the researcher. When the participants agreed to take part in the study, they signed the consent form to make sure they volunteered to join the program. They had all rights to refuse participation, to stop being involved in the study at any time or to refuse to answer any questions without prior explanation. No physical examinations, no harmful or invasive procedures were conducted on the participants in this study. All medical techniques performed on the participants were done by the registered nurses and doctors of the ward as routine care. In case the participants had some anxiety or distress due to the effect of the program, the researcher tried to reduce their uncomfortable feelings, provide more support and counseling time to help them overcome these unexpected events. The staff nurses and doctors did not know whether the subjects were in the experimental group or the control group; therefore, there was no difference in the treatment and care between two groups.

4. Research instruments

The instruments in this study were the instruments to collect data, the UMP and the instruments to check the validity of the UMP.

4.1 Instruments for data collection

Instruments for data collection included the personal information questionnaire and the Quality of Life Index.

4.1.1 Personal Information questionnaire

The Personal Information questionnaire was used to obtain the demographic characteristics of the subjects such as age, marital status, level of education, occupation, monthly income, type of mastectomy, care by a family member.

4.1.2 Quality of Life Index

Quality of Life Index (QOLI) (Padilla & Grant, 1985a) originally had 23 items and it was approved by Padilla Geri via email for the researcher to modify and use this scale. QOLI was then translated and modified, followed by reliability and validity testing on Vietnamese post-mastectomy women. The five dimensions in the original version, which were physical well-being, psychological well-being, body image concerns, diagnosis/treatment, and social concerns, were retained in the questionnaire. However, three new items, namely swollen arms, breast removal sensitivity, and hand raising ability were added to the treatment response dimension, and another item called perceived femininity was added to the body image concerns. One item sexual satisfaction was deleted based on experts' suggestion and cultural aspects. The modified questionnaire finally had 26 items with a self-rating horizontal scoring from 0 (not at all) to 10 (a great deal/completely) and took around 10 minutes to complete. The sum score of QOLI-V was calculated by recoding negative items and dividing the sum of all items score by the total number of items. The minimum score of QOLI-V is 0 and highest score is 10. A higher score of QOLI-V indicated higher QOL. Literature reviews suggest that the cutoff point for QOL is globally considered at 50.00 in the 0-100 score scale. This means a score lower than 50.00 is considered at poor level, while 60.00-70.00 at moderate level and a score greater than 70.00 is at good level

(Diouf et al., 2015; Silva et al., 2014). Using this global criterion, the level of QOL in this study was set as follows: < 5.00 is poor, 6.00-7.00 is moderate and >7.00 is good.

4.1.3 Validity and reliability of the data collection instruments

In this study, after the researcher received the permission of the original author, the QOLI was modified to fit with the context of post-mastectomy women. The 27-item QOLI was then sent to 5 experts to test its content validity. The result showed that the lowest I-CVI was .80 and the highest was 1.00; S-CVI/Ave was .95 and S-CVI/UA was .76, which implied good validity for this instrument (Grant & Osanloo, 2014; Polit, Beck, & Owen, 2007). The CVI testing done by 5 experts confirmed that most of 27 items were rated from 3 (relevant) to 4 (very relevant). The sum agreements of each item related to quality of life post-mastectomy were calculated and the result confirmed that most of the items were correlated well with quality of life post-mastectomy, except the item of sexual satisfaction with the I-CVI rating of only (.40). The researcher thus considered deleting this item to conform to the Vietnamese culture.

The modified QOLI with 26 items was then translated into Vietnamese using Brislin's Model. It was first translated from English into Vietnamese and back translated by two different bilingual experts at the Language Center, University of Medicine and Pharmacy, Ho Chi Minh city. After that, the two translated versions were reviewed by a Vietnamese nurse who was responsible for teaching English to nursing students at the university and she helped identify ambiguous words and confirm the symmetric. The Vietnamese version of the Quality of Life Index (QOLI-V) was then assessed for its understandability in Vietnamese context and culture with 5 cases of post-mastectomy women and nurses in the Surgical Oncology Ward. The experts suggested the appropriate translation of the meaning of "strength" in

Vietnamese as the women found it difficult to understand. The translated word in Vietnamese was “sức mạnh” but the back translation became “power” which means “năng lượng” in Vietnamese. The second item that was found too ambiguous to understand was the breast removal sensitivity and experts suggested making the meaning of sensitivity clearer by wording it as tingling, itching, burning, formication, and numbness. The piloting of QOLI-V also showed that most of the women skipped the question about sufficient sexual satisfaction after mastectomy. When the researcher discussed the reason with the post-mastectomy women, they answered that the mastectomy treatment was terrifying and tiring so they and their husbands did not want to have sex, or that it was meaningless in post mastectomy period.

In addition, it is Vietnamese culture that women often feel embarrassed and uncomfortable when asked about their sexual activities or are unable to express the meaning of sexual satisfaction. During the stage of 3 weeks after mastectomy, sufficient sexual satisfaction was pointless to ask because they were usually concerned about other aspects of their life rather than sexuality. Therefore, this item was deleted from the questionnaire. The revised translated version (QOLI-V) with 25 items was then tested for its reliability with 40 Vietnamese subjects who had the same criteria as the subjects of the study. Cronbach’s alpha of QOLI-V was .81, which was acceptable for the modified instrument (Polit & Beck, 2003).

4.2 Instrument for intervention

The intervention of this study was the Uncertainty Management Program for women with breast cancer after mastectomy. This program was developed based on the underpinnings of the theory of Uncertainty In Illness (Mishel, 1988) with the content adapted from the manual guidelines of Physical Exercises and Emotion in

Cancer (Cancer Council Australia, 2013, 2014), the Thai-style Qigong (Thanasilp, 2012) and evidences from literature.

4.2.1 Program development

4.2.1.1 Researcher Preparation

Before conducting the Uncertainty Management Program, the researcher needed to have more knowledge and skills related to emotional support and Qigong practice. Therefore, the researcher took part in the clinical setting to discuss with the post-mastectomy women and identified their uncertainty and their needs. Besides, the researcher learnt about emotional support by reading many reference books and research papers on interventions for uncertainty and negative emotions in women with breast cancer after mastectomy. For Qigong, the researcher learnt Qigong from her advisor who was an expert in Thai-style Qigong, and then practiced for more than 3 months until she understood and recognized the effect of Qigong on improving physical and mental health. All of the experiences benefited the researcher in conducting the Uncertainty Management Program for post-mastectomy women in Vietnam.

4.2.1.2 Facilities Preparation

The UMP activities mostly took place in the consulting room, the conference room and the procedure room. For the conference room, it was equipped with a computer, a microphone, a screen, chairs, which were arranged for the training of a group of post-mastectomy women. For the consulting room and the procedure room, the researcher ensured the participants' privacy and comfort by having the schedule

for using these rooms separated from other activities of the Ward. The researcher had assistants to help with the booking and preparing of the rooms to conduct the intervention of UMP at the hospital.

4.2.1.3 Developing the content of UMP

The UMP was developed based on The Uncertainty in Illness Theory (UIT), existing uncertainty interventions, and evidence-based clinical support. Based on evidences, in order to reduce uncertainty post-mastectomy thus improving the QOL, the content of the UMP was structured to combine informational support, social support, emotional support, and Qigong practice.

The content of UMP

1) Informational support included eight lessons about mastectomy knowledge, developed by the researcher according to the instruction for breast cancer information (Allinson & Dent, 2014; Medical Care Services California, 2016) and the emotions guidelines (Cancer Council Australia, 2013). The informational support section provided knowledge about 1) Definition and type of mastectomy, 2) Mastectomy procedure at the ward, 3) Mastectomy procedure in the surgical room, 4) Short-term and long-term mastectomy complications, 5) Body image after mastectomy, 6) Expected emotions after mastectomy, 7) Post mastectomy skin care, and 8) Post mastectomy nutrition care.

2) Qigong practice was adapted from the Thai-style Qigong (Thanasilp, 2012) and was instructed in the UMP to reduce mastectomy complications such as shoulder stiffness, lymphedema, fatigue and anxiety in women with breast cancer after mastectomy (Markdump, 2014; Reanrhom & Thanasilp, 2014)

By definition, Qi is humans' life power and it varies by individuals. Qi can be

generated from inside a person him/herself or from external sources. The external sources can be the ground via the root of foot, from sunshine, from breathing or from other people. Gong, on the other hand, is the movements that help a person to draw out the life power. This often involves slow movements of hands and body in coordination with one's breathing.

Qigong together is the training on how to improve the power of the body through breathing, blood circulation and stimulation from other power sources of life.

The principles of Qigong are breathing, movement, concentration and compassion. These techniques help to balance and stimulate every energy point in the body, to improve circulation, and to make the body healthier. When the body is strong, the illnesses are destroyed.

The major activities of Qigong practice included warm-up (with deep breathing and mind concentrating on the hands), opening the six energy points (coccyx, below umbilicus, chest point, front of trachea, between eye-brows, and crown of the head), four positions of Qigong (Chest stretch, Flying eagle, breath expansion, and Power convergence), mediation and compassion.

Each step was presented with a picture to illustrate the movement and then followed by a full demonstration video. The Qigong practice involved breathing effectively for the first 10 minutes, and then 10 minutes to warm up, 20 minutes for the basic positions and the last 10 minutes for meditation and compassion.

3) Emotional support was composed of breathing relaxation (the first part of Qigong), mirror intervention (Freysteinson et al., 2015) and disclosure of negative emotions skills (Cancer Council Australia, 2013). First, deep breathing stimulated circulation, provided energy, released anxiety and helped post-mastectomy women remain unruffled (Fong et al., 2014; Oh et al., 2012). Then exposure to the mirror

aided them in adapting themselves to the new body changes. Finally, discussion and disclosure of the negative feelings after seeing the changed body with nurses helped reduce their negative body image.

4) Social support consisted of three segments, 1) roles and duties of doctors, nurses, and nursing assistants in the system of care, 2) communication skills and questions to ask nurses or doctors, 3) list of websites and networks for sharing, discussing and searching for more information. This pattern was developed by the researcher from the evidences and guidelines of Breast Cancer Council (2013).

The process of UMP

Systematic reviews suggested that the intervention to improve QOL should focus on before and after primary treatment (Stavrou et al., 2009a). Also, intervention at primary treatment or after that were also reported to benefit QOL post-mastectomy (Sammarco, 2001). It is also worth noting that uncertainty and poor QOL occurred at the same time in the post-mastectomy stage. In addition, uncertainty predicted QOL, therefore the intervention targeting to reduce uncertainty at hospital can help improving QOL. The middle range theory explained that the initial experience would influence post-mastectomy women's ability to manage their illness events in different circumstances (Meleis et al., 2000), and that those who were supported or educated before uncertainty occurred could continue coping with their illness later (Knobf, 2002). Based on these rationales, the UMP was conducted at four major transition times. The first time was 3 days before mastectomy to provide the participants with sufficient knowledge and skills to confront the surgery. The second time was 3 days post mastectomy, which helped adjust their body image concerns because this was when the first wound dressing changing took place and they could see their breast incision for the first time. The third time the UMP was carried out was on the

discharge day to review knowledge and schedule the practice plan for the participants to manage their symptoms at home. The last activity of the UMP was 3 weeks after mastectomy, when they received the pathology result and consultation for further treatment. At this point, the UMP was completed because after that the participants transitioned to another stage of treatment, which was no longer the post-mastectomy stage.

Materials of the UMP

1) The program manual: After developing the content of the UMP, the program manual (teaching plan) which guided the implementation of the UMP for post-mastectomy women was also developed. The teaching plan was composed of the objectives, methods, activities, materials, preparation, and evaluation methods for each section of the program.

2) The booklet: was written by the researcher to provide necessary information and skills. It included all of the UMP content and was given to those who took part in the program on day 3 before mastectomy

3) The Thai-style Qigong video: was used to instruct the participants during the first section of the program.

4) The mirror: The post-mastectomy women were provided by the researcher with a normal home mirror. The size of the mirror was big enough for them to see their body and the incision.

5) The home practice planning form: The form was designed by the researcher, with the timetables decided after discussing with the participants before discharge. The participants were required to report their practice trajectory at home in two weeks and submit the evaluation paper on the meeting day with the researcher after 3 weeks.

Table 2 Summary of the UMP

Phase	Goal	Contents	Methods & Materials	Day & Time
1. Informational support Social support Teaching Qigong	Reduce uncertainty of mastectomy procedure, symptoms, emotions & system of care in hospital during post mastectomy stage	Mastectomy procedure & complications Nutrition and skin care Feelings occurring post mastectomy Responsibility of staff Communication skills Sources of websites, organizations	PPT teaching Booklet Motivation sharing Verbal & eye contact Questions and Answers Evaluation form	Day 3 before Mastectomy 40 minutes
	Relax Provide energy Reduce post mastectomy symptoms	Breathing technique Hand movements Mind control Four positions Meditation Compassion	Picture and Video presentation Teaching & learning Simulation	Day 3 before Mastectomy 50 minutes
2.Breathing relaxation	Reduce complications post-surgery	Deep breathing Moving hands Mind control	Group teaching Simulation And practice	Day 3 Post mastectomy 15 minutes
Emotional support	Reduce negative body image, anxiety, anger, fear of the incision	Look into a mirror Emotion disclosure skill Body image concerns	Look at the scar in the mirror Talking and sharing Open questions and listening	Day 3 Post mastectomy 30 minutes
3. Discharge planning Set up schedule and contact	Encourage participants to continue practice Qigong to reduce long term complications, and improve health	Provide phone contact Schedule to practice at home and evaluation method Appointment for follow up	Individual teaching Booklet Counseling method Motivational method Individual discussion Evaluation form Phone number	Day 7 Post mastectomy (Discharge time) 10 minutes

Phase	Goal	Contents	Methods & Materials	Day & Time
Qigong practice	Reduce arm lymphedema, shoulder stiffness, fatigue, pain, anxiety post mastectomy	Breathing Warm up Four main acts Meditation & compassion	Reviews Instructing Practicing Video	Day 7 Post mastectomy (Discharge time) 50 minutes
4. Practice at home	Motivate and keep in contact with the participants Evaluate the Implementation process of the program	Practice exercises, Qigong, nutrition and skin care at home according to the plan	Talking Discussing Asking about difficulties Asking about the achievement Phone call 1	Day 12 Post mastectomy 10 minutes
	Motivate and keep in contact with the participants	Practice time Schedule General health Remind about the follow up	Talking Discussing Result of practice Phone call 2	Day 19 Post mastectomy 10 minutes

4.2.1.4 Validity of the UMP

The UMP was tested for content validity by five experts to validate the appropriation of its contents, activities, timeframe, and material use. The experts consist of:

One surgeon who is an expert in mastectomy surgery, working at the Breast Surgical Oncology Ward, Oncology Hospital, MS. MD, with 15 years of experiences

One head nurse of the Breast Surgical Oncology Ward, with over 20 years of experience in Mastectomy care, BSN. RN

One specialist nurse of the Breast Surgical Oncology Ward, with over 10 years of experience in Mastectomy care BSN. RN

One head of the Surgical Nursing Department, Nursing Faculty in University of Medicine and Pharmacy, nursing lecturer, MSN. RN

One Oncology nursing lecturer from Thang Long University in Ha Noi, PhD.RN.

Most of the experts made recommendations about the content and the material of the UMP. For the content, specialist nurses and doctors who worked at the hospital suggested that the researcher should add physical exercises, which had been taught to women with breast cancer after mastectomy (as routine) at the Surgical Oncology Ward, to the booklet so that post-mastectomy women could also practice it at home. The second suggestion was to provide more specialist websites in medicine for the post-mastectomy women to search for more information if they needed. The third one was to clearly state the steps of Qigong in the booklet, so that the participants might remember some steps which they would only practice after 7 days of surgery. The fourth recommendation was made by the doctor who wanted to add some questionnaires to the communication part in the booklet. As for the booklet quality, experts recommended that the researcher should shorten the sentences, enlarge the size of the printed letters, use more familiar words to indicate post-mastectomy women in Vietnamese language. The program was revised based on the suggestions and recommendations of the 5 experts and then sent to them again to confirm the validity and feasibility of the program.

4.2.1.5 Program try-out

After the revision of the UMP was qualified, the program was piloted with 2 women undergoing mastectomy. Overall, they were satisfied with both the content and the process of the UMP. They understood the content in the booklet, remembered

the knowledge and skills, and managed to continue practicing Qigong at home. The time for each phase of the program was convenient and sufficient for them and the process of the UMP was deemed practical because they could learn about mastectomy before undergoing it. The two women expressed that they thought the UMP reduced their nervousness before the surgery. After mastectomy, they recognized the similarity between the knowledge they learnt from the UMP and the reality. The two women expressed their interest in the mirror exposure intervention. They thought that it would benefit the women undergoing mastectomy as they could see the changes of their body after mastectomy together with the nurses. The Qigong practice was also reported to help them feel healthier. No part in the UMP caused negative effects on the subjects.

4.2.1.6 Research assistants preparation

Two research assistants, who were clinical nurses at the Surgical Oncology Ward volunteered to work in this study. The assistants learnt about the purpose of the study, the flow of the project, the content of the questionnaire for data collection, and the content and procedure of the UMP. The role of the research assistants was to support the researcher in arranging the participants' mastectomy schedule with their full name list, contact information, and medical profile, and scheduling to keep track on the participants together with the researcher. The researcher assistants were involved in preparing and equipping the rooms and making appointments with the participants for the training and counseling activities in the UMP. They also took part in collecting data together with the researcher.

4.2.2 Program Implementation

The UMP was implemented for women with breast cancer post-mastectomy within 3 weeks after mastectomy. It was composed of six phases that promote knowledge of mastectomy surgery, emotional support, social support, and skills to manage physical and psychological symptoms in order to improve their quality of life. The process of implementing each phase was described in terms of place, time, duration, aims and activities.

Phase 1: Building up the relationship of the researcher and participants

Place: The consulting room

Time: 3 days before mastectomy

Duration: 15 minutes

Aims and activities

1) Building up the relationship between the mastectomy women and the researcher: The researcher was introduced to women expected to undergo mastectomy by the referral of the head nurse of the Ward. Then, the meeting started with the presentation of the researcher's personal information including place of work, home address and contact number. After that, the researcher presented the purpose which was to help them reduce their difficulties during the mastectomy treatment.

2) Assessing the subjects' uncertainty and needs: After presenting the purpose of the meeting, the researcher raised some open questions such as what were the difficulties experienced before mastectomy time, how post-mastectomy women felt, and how they managed by themselves. Based on their response, the researcher noted that a major portion did not know about mastectomy types and mastectomy procedure

in the surgical room as well as mastectomy complications. Almost all of the participants felt worry about undergoing mastectomy; however, some expressed confidence with this event. All of them said that they found it more difficult in asking questions to doctors than to nurses. In addition, they were uncertain about the prognosis of treatment and further treatment process. The researcher also questioned about their body image concerns and discovered that they had difficulties talking about their body image or femininity at first. After asking follow-up questions and open questions, they were able to express their true feelings that they were really concerned about the changes of their body. The first assessment helped the researcher draw up the picture of the uncertainty in women undergoing mastectomy.

3) Recruiting participants to the UMP: After collecting information, the researcher explained the purpose and process of the UMP and invited those who satisfied the inclusion criteria to take part in the study. The women who volunteered to join would sign the informed consent with their name and their contact number, to prove that they understood and accepted to be in the study. The random assignment of the participants to the experimental group and the control group was also explained to the participants. It was also made clear to those who did not meet the inclusion criteria that the criteria needed to be fulfilled in order to ensure the effect of the UMP. However, they would still receive the same quality of care with those who were in the study and they could contact the researcher if they needed help. At the end of the recruitment, 60 subjects were assigned to the control group and 59 were assigned to the experimental group.

Phase 2: Informational support, social support and Qigong practice

Place: The conference room

Time: 3 days before mastectomy

Duration: 90 minutes

Room and equipment for teaching: The conference room was equipped with a screen, a projector, a microphone, and enough chairs for the participants in a private environment. The materials to teach the participants in the UMP were booklets and a video tape

Aims and activities

1) Providing knowledge about mastectomy, mastectomy-related physical and psychological symptoms, and Qigong practice

Both control and experimental groups in this phase were first invited to the room with the staff nurses. The nurses informed them of the routine care including the preparation of mastectomy procedure, laboratory test, anesthesia examination, documentation, policy of health insurance, payment process, the ward policy for post-mastectomy women and their family members, and the schedule of the mastectomy. If the subjects met some difficulty and asked for help, the researcher discussed with them and then referred them to the staff nurses. The instruction by the staff nurses took around 30 minutes in the morning

For the experimental group, after attending the instruction of the staff nurses, they received the booklets and continued with phase 2 of the UMP with the researcher. The Qigong was taught first in order to help them relax, refresh their mind and recharge energy for taking in more knowledge.

After that, the researcher displayed pictures and video of Qigong practice with Vietnamese instructions and then performed each step of this method to the subjects and they imitated the moves step by step. The Qigong practice involved breathing effectively for the first 10 minutes, and then 10 minutes of warm up, 20 minutes for the 4 positions, and the last 10 minutes for meditation and compassion. The researcher repeatedly reminded the participants that it was important to stay focused and mindful, and move as slowly as they could. During Qigong practice, the participants kept their eyes closed, relaxed and stood barefoot. After the researcher's presentation, they practiced by themselves under the observation of the researcher. The researcher would correct any wrong movement and instructed them with a slow soft voice. During the practice, a video with soft music was turned on to help them keep their mind focused, calm, and relaxed. At the end of the Qigong practice, as the subjects felt warmth in their hands, they meditated for 10 minutes and finally put their hands on their breast sides, which were inflicted with illness.

Afterwards, the researcher gave the participants a power point presentation about knowledge of mastectomy including its definition and types, its surgical procedure in the surgical room, its complications, expected emotions, nutrition and skin care, communication skills, and related websites or network links. The content was based on the standard UMP written in the booklet. The researcher verbally explained about the mastectomy surgery and what happened in the surgical room using some pictures in the booklet, and answered questions if any or stopped to evaluate whether the participants and their family were able to follow the presentation. Complications, expectation of incision, scar, skin sensitivity, body image change, arm lymphedema, shoulder stiffness, pain, fatigue or sleep loss were

all described for the participants to prepare well for what might happen after mastectomy. After the presentation, a motivation technique was used to encourage participants to ask and discuss what they thought. A questionnaire was done at the end of the session to make sure they understand the knowledge provided.

2) Providing information and skills to communicate with structure providers like doctors, nurses and family members

In this part, the participants were trained to communicate with family members, nurses, and doctors. The researcher discussed what made them feel scared or hesitant to contact health caregivers. Afterwards, communication guidelines concerning communicative expressions, eye contact, distance between speakers, content and time for communication were taught to the subjects. In addition, this part included the responsibility of doctors, nurses and other staff in the ward. Some examples were given about the skills to make the communication with the doctors or nurses easier. Ways to have better communication included being specific about symptoms, writing down instructions, improving communication skills, and thinking of the doctor as your partner in managing your illness. The researcher also mentioned about improving communication between the participants and their family members using appropriate expressions, sentences, tone of voice, eye contact and body language which would help encourage them to express their sharing and caring for each other.

3) Providing knowledge of post-mastectomy skin care and nutrition care

In this section, the participants and their family learnt how to care for the skin at the incision site of the breast. Cosmetics, lotion, oil and sun protection helped to reduce the sensitivity of the skin after mastectomy. It was also advised to avoid

scratching or applying hot/cold compress on the incision. The sensitivity or tingling or the skin might be reduced by massaging. Regarding nutrition, fresh and nutritional food like meat, eggs, vegetables, fruits and milk were recommended. It was advisable to eat several meals per day with a small amount for each meal, drink 2 litters of fresh water and more fruit juice every day, and reduce fat, sugar, and salt in their diet in order to be healthy. Intake of instant food and food that contained harmful substances should be reduced to lessen the risk of cancer spreading out. Food should be cooked well enough to preserve the beneficial vitamins, and meat or bone should not be cooked in the soup for too long (as a customary cooking technique in Vietnam) because its nutritional values would be reduced. It might also be helpful to have additional nutritional medicine to improve their health and recovery as advised by doctors.

5) Providing media sources to access more information

To end the second phase of the program, the researcher provided the subjects and their family with the links to the websites of Vietnamese Breast Cancer Association, Pink Smile Campaign, Breast Cancer network in Vietnam, organizations and funds for supporting post-mastectomy women with aesthetic bras or hair wigs, as well as the Facebook page for women with breast cancer after mastectomy, where they might share their experiences and learn from their peers how to manage their life in the future. After the section ended, the participants took the booklet with them to assimilate the knowledge and practiced Qigong again by themselves before mastectomy.

Phase 3: Body image concerns and emotional support

Place: Procedure room and patient rooms

Time: Day 3 post mastectomy

Duration: 50 minutes

Equipment: The dressing change kit, nursing tray, the mirror, paper and pen

Aims and activities

1) Viewing the breast incision site in the mirror as the post-mastectomy women's first experience of change in their body

The control group received normal dressing change and consultation about the surgical drain care with staff nurses at the procedure room as routine care, and then received physical therapies with rehabilitation nurses in the room according to the schedule of the ward.

The experimental group, on the other hand, at the beginning of the dressing change, were informed that they could see their surgical incision site when the nurses undressed the wound. The researcher encouraged the subjects to first look at their face and hair in the mirror and then move on to the breast incision site. They were then provided with the mirror to look at their body. After that, the nurses applied normal dressing change, routine consultation, and routine post-mastectomy physical exercises as usual.

The intervention of viewing oneself in the mirror helped in dealing with body image concerns. This took place in the procedure room, privately between the subject, the nurses, and the researcher. Most of the subjects wanted to look at their body in the mirror. After viewing themselves in the mirror, some had a neutral reaction, while one expressed fright, and some others expressed sadness.

2) Disclosing and discussing about negative feelings and negative body image

At first, the researcher discussed about how the participants felt, what they thought, and what they wanted to do to reduce uncomfortable feelings. The researcher explained that their feelings were a normal reaction of human in response to the stressful event. Then the researcher instructed them with methods to distract themselves from the uncomfortable feelings and focus on things that helped them overcome their feelings. The researcher also discussed about the person whom they wanted to talk to when they felt uncomfortable. Nurses, family member, or friends were encouraged to support the participants emotionally. Besides, some skills to disclose negative thoughts were also suggested, such as writing down on paper what they thought, drawing some pictures or using stickers that expressed their feelings, writing a diary for only themselves or writing a blog to share with others. They were provided with paper and pen to write down their feelings, and some of them had their notes sent to the researcher.

3) Practicing breathing relaxation to reduce anxiety

The third activity of this phase was breathing relaxation practice for 10 minutes. The subjects were instructed with the beginning steps of Qigong including closing their eyes, breathing deeply, moving hands, and using mind control to stimulate circulation in the body, reduce stress, and provide energy. After 10 minutes of practice, some women told the researcher that they felt calm, relaxed and no thing in their mind. However, some got tired after the dressing change so the researcher had them rest at their bed and made appointments for them to come back for Qigong breathing practice later. In the end, most women in the experimental group completed phase 3 of the UMP except one who suffered from dizziness and low blood pressure so she could not complete the exercises in this phase.

Phase 4: Reviews and preparation for home practice

Place: the consulting room

Time: day 7, before discharge

Duration: 60 minutes

Equipment: QOLI-V, MUIS-SF, Practice evaluation form

Aim: Evaluate the reduction of uncertainty and QOL post-mastectomy

Activities:

In this phase, the researcher gave a review of all the knowledge and skills that had been provided during the UMP including ways to communicate, to reduce physical and psychological symptoms, and to maintain nutrition and skin care. The researcher also reviewed and presented the Qigong steps to the participants again. In this phase, the subjects were asked to do the full practice session of Qigong to help them reduce post-mastectomy symptoms and get more energy. Therefore, they were encouraged to practice Qigong at home once per day, and at least 3 days per week.

At the end of this phase, the researcher asked again about the knowledge that the participants and family learnt in the program, their attitude towards applying these knowledge and skills in the future and whether it would be easy or difficult for them to continue practice at home. Then the researcher and the participants together made the schedule to keep practicing these skills at home. Contact addresses and phone numbers of the participants, their family member and the researcher were exchanged to maintain contact and the participants took the schedule home with them afterwards. Each subject was then represented by a code for the researcher to identify them in further stage. The schedule for the follow-up was also clearly presented to the participants. They would follow the schedule and, during their stay at home, they

would receive two phone calls from the researcher for assistance. The participants and their family members might contact the researcher any time when they needed help.

The MUIS-SF was used to measure uncertainty in post-mastectomy women in this stage to confirm that they had low uncertainty after attending the 3 sections of the UMP and that they could continue managing their physical and psychological symptoms at home.

After the MUIS-SF was completed and the researcher was assured that the subjects' uncertainty had been reduced, the QOLI_V was carried out to evaluate the subjects' QOL at 1-week.

Phase 5: Practicing at home

Time: Day 12 and day 19 post-mastectomy

Duration: 10 minutes

Equipment: Phone, paper and pen

Aim: Encourage participants to continue practicing the Qigong and disclose their feelings at home to reduce physiological and psychological symptoms

Activities:

During this section, the researcher made two phone calls to the participants, one call per week. The researcher reminded them and their family about the knowledge and skills they had learnt, asked for their attitude towards home practice, discussed about their difficulties and achievement they got at home, asked about their general health and symptoms during the week, motivated and kept them engaged in practicing these skills to improve their functions and health. No woman in the experimental group incurred serious complications post-mastectomy. Some had swollen arms but it was not serious, and most of them were able to return to normal

and do their daily activities. Some women went back to work and their health improved. Most of the subjects were happy and willing to talk about their health, whereas some still felt difficult and had yet to return to normal. Some subjects called the researcher sometimes to ask for some counseling on food choice, massage methods and present some of their own experience in post-mastectomy self-care. The researcher noted after the second phone call that, regarding the Qigong practice report, almost all subjects practiced qigong at least 3 times. However, they mostly focused on breathing, hand movements and mind control, which were easier for them. The four main steps of Qigong were only done by 46 of the subjects. Most women did the breathing, hand movement and mind control more than the main steps because they liked that part, it was easy to do and their arms were still in pain so they could not raise their arms as required by the main Qigong steps.

Phase 6: Program evaluation

Place: the consulting room

Time: 3-weeks post-mastectomy

Duration: 15 minutes

Equipment: Booklet, QOLI_V

Aim: Evaluate the QOL after home practice

Activities:

For the practice evaluation form, only 47 subjects sent it back to the researcher because the rest of them forgot; however, drawn from the researcher's notes about their response during the phone calls and the results of the evaluation forms, it has been shown that not all subjects practiced Qigong 3 times per week as planned. The emotional report also showed in the evaluation form that the subjects paid much

attention on caring for their emotion as they put more fun and happy stickers on the evaluation form.

The women in the control group filled out the questionnaire of QOLI_V at 3-weeks, and then received the booklets from the researcher, which could help them make clear some of their uncertainty and better cope with further treatment. If they had any question or need support, the researcher was willing to offer them more time and consultation.

Experimental subjects met the researcher to fill out the QOLI_V at 3-weeks, then reported about their home practice, and the difficulties at home, and consulted with the researcher ways to practice more effectively in the future. After that, they met the nurses and doctors to receive the result and new treatment plan for their disease.

4.3 Validity check of the intervention

The intervention of this study was the Uncertainty Management Program. The effect of the program was checked by the modified Mishel Uncertainty in Illness Scale Short-Form (MUIS-SF) and the practice evaluation form. The modified MUIS-SF had 10 items with 5 Likert scale ranging from strongly disagree (1) to strongly agree (5). Therefore, the raw score of MUIS-SF was 0-50. A higher score means lower uncertainty. The MUIS instrument had been used to examine the impact of uncertainty in illness in women with breast cancer (Hagen et al., 2015); therefore, MUIS was a reliable scale to test uncertainty in post-mastectomy population. After the researcher received permission from the author of the MUIS Community Form, its questionnaire was shortened, which only used the main items related to the UMP. The final MUIS_SF, which included 10 items, was the validity check for the Uncertainty

Management Program. The MUIS_SF was also translated and back translated at the same time with the QOLI by the same experts. The ratings yielded a S-CVI of 0.90 and a Cronbach's alpha of 0.74 in 40 cases of mastectomy women after 1 week.

The practice evaluation form was designed by the researcher with three main parts: the timeframe for practicing the Qigong, time for practice physical exercises, and time for disclosing their emotions at home.

4.3.1 Validity check result

The MUIS-SF was used to measure uncertainty in the subjects 1-week post-mastectomy to confirm that the subjects, after attending three sections of the UMP, had a low score of uncertainty. It was assumed that when uncertainty at the hospital was low, participants could manage their coping mobilizing strategies such as following the plans, independently seeking more help, and continuing Qigong practice and other skills at home. The result showed that, of 58 women in the experimental group at 1 week, 57 (98.3%) subjects answered the questions with scores of 4 (agree) and 5 (very agree). Only 1(1.7%) participant answered an item with a score of 3 (undecided). The mean score of 58 participants was 43.60, which implied very low uncertainty. The result of the validity check showed that the UMP improved the knowledge and skills of the post-mastectomy women, thus lowering the uncertainty at 1-week post-mastectomy.

4.3.2 Evaluation of home practice

For the evaluation practice form, not all participants sent it back to the researcher because they forgot. There were only 43 participants who sent the evaluation back. However, the researcher noted from the second phone calls that most

of the subjects practiced Qigong at least three times. Not all of them rated their feelings every day; however, all of them reported that they felt better after three weeks. The result of the practice evaluation form showed that more than 80% of the participants completed the home practice plan. Interestingly, they usually did not practice the full steps of Qigong. The practice that they mostly focused on were breathing, hand movement, mind control, the first and the second position, which were easier to them. The full steps of Qigong were only done by one third of the subjects.

5. Data Collection

The Vietnamese version of Quality of Life Index was measured two times: 1-week post-surgery and 3-weeks post mastectomy. At the time of data collection, the researcher or the researcher assistants were available to offer explanation or clarification of the questionnaire in case it was needed. After the subjects finished the questionnaires, the researcher checked all the pages to scan for any missing answer. When the checking was done, the researcher marked each answer with a code. For each time, the same person was coded with the same sign for ease of recognition and data input.

For the control group, initially there were 60 subjects but then 2 subjects dropped out of the program at 1 week because of their health status. Two women had swellings in their arm area and unusually increased drainage, thus extending the time for hospital discharge to more than 7 days. For the experimental group, the initial number of participants was 59 but 1 subject left the program at 1-week due to unstable vital signs, dizziness and low blood pressure from day 3 until day 7 post-mastectomy. Another subject refused to answer the questionnaire at 3-weeks because

her husband and her mother rejected her. This woman started crying when she met the researcher and talked about the difficulties during the two weeks at home. Then the researcher specially set the time for her to calm down, listened to what she said, empathized, and encouraged her to share her thoughts and feelings with other friends and other family members to find the way to overcome her situation. Later, she was sent to consult with her physician about her pathology result and further treatment. The researcher decided to eliminate this subject from the data for two reasons. First, it was not right to persuade a woman to answer questions that remind her of her suffering from the disease and her family situation. Second, based on the Uncertainty in Illness theory, anxiety and negative feelings might have an impact on uncertainty and reduce quality of life, thus adding this subject to the whole data could bring some bias into the analysis.

6. Data Analysis

Data were digitally inputted and analyzed by SPSS version 16.0. Descriptive statistics were used to analyze the demographic characteristics of the subjects in both experimental and control group and in total. Demographic data were analyzed by using frequency, percentage, means, and standard deviation and the Chi-square test was used to examine the differences between the experimental and control groups on categorical variables. For the hypothesis testing, the independent t-test was applied to measure the difference between the total QOL and sub dimensions of QOL in both groups at 3-weeks post-mastectomy. For further exploring the effectiveness of the UMP, the paired sample t-test was also implemented to see the change of QOL and the sub-dimensions in the experimental group and the control group after discharge hospital followed by two weeks at home.

CHAPTER IV
RESEARCH RESULTS

This chapter presents the major findings of the study in order to prove the hypothesis. The content of this chapter starts with the description of the participants' characteristics, then continues with presenting the overall score of QOL, the details of QOL dimensions, and the report of QOL items. In each figure of the QOL, the comparison between groups was established. For the additional portions of the study, the comparison of total QOL and each QOL dimension within groups was analyzed and the opinions of the women who took part in this study were also reported.

1. Demographic characteristics of the samples

Overall, the experimental and control groups did not differ in terms of demographic data, as indicated by chi-square testing results. Participants consisted of women with breast cancer post-mastectomy, 40-60 years old, 70% of whom were married and lived with their families. Nearly half of them finished secondary school, and one-third had attended primary school and high school. Very few subjects pursued undergraduate education or higher. Most were homemakers, farmers, or worked in small businesses. In this study, 62.7% of the participants had an income of less than 3 million Vietnam dongs (VND) (< 150 USD) per month. Nearly 80% had a family member at the hospital, in both groups. Regarding the mastectomy type, 38.3% underwent simple mastectomy while 61.7% underwent radical mastectomy.

In the control group, a majority of the subjects were middle aged, with 81% aged 40-60 years. Married women took up more than 72.4% and nearly 30% had other types of marital status. More than one-third (36.2%) of the subjects in this group

finished secondary school, a quarter of the subjects finished primary school and high school, and only a limited number received undergraduate or higher education. There were more than 65% who worked or stayed at home and around 35% who worked outside. 53.4% of the subjects had monthly income of less than 3 million dongs, 37.9% had moderate income of around 3-5 million dongs, and a very small proportion reported higher income.

As regards the experimental group, 82.5% of the subjects were middle aged. 70% of women in this group were married, 19.3% widowed, and 7% single. For the educational background of experimental subjects, the result showed a similarity with the control group. As for their occupation, there were 45.6% who were housekeepers, 26.3% doing small businesses, and nearly 20% working for companies or at offices. The highest income level among the group was VND 7-10 million monthly, which accounted for only 3.5% of the experimental group, while a lower income level of VND 3-5 million took up 24.6%. The largest proportion of the subjects had the lowest monthly income of less than 3 million dongs, at 71.9%. The statistics of demographic data are presented in table 2

Table 3 Demographic characteristics of the samples by groups

Characteristic	Control group	Experimental group	Chi-square χ^2	p-value
	n=58 (%)	n=57(%)		
Age			5.09[a]	0.28
30-39	11(19.0)	10(17.5)		
40-49	25(43.1)	23(40.4)		
50-59	22(37.9)	24(42.1)		
Marital status			4.72[a]	0.97
Married	42(72.4)	40(70.2)		
Widowed/divorced	8(13.7)	13(22.9)		
Singled	8(13.8)	4(7.5)		
Education			16.24[a]	0.44
Primary school	12(20.7)	14(24.6)		
Secondary school	21(36.2)	25(43.9)		
High school	16(27.6)	15(26.3)		
University or higher	9(15.5)	3(5.3)		
Occupation			16.89[a]	0.39
Housework	23(39.7)	26(45.6)		
Small business	13(22.4)	15(26.3)		
Worker	10(17.2)	11(19.3)		
Officer	7(12.1)	3(5.3)		
Retire	5(8.6)	2(3.5)		
Monthly income (VND)			0.93[a]	0.98
< 3 million	31(53.4)	41(71.9)		
3-5 million	22(37.9)	14(24.6)		
5-10 million	5(8.6)	2(3.5)		

[a] Using Fisher's Exact test

2. Characteristics of the sample related to mastectomy care

Two characteristics of the sample related to mastectomy care were family care givers and mastectomy types. In the control group, 83.4% of the subjects had a family caregiver while in the experimental group, only 74.8% were accompanied by a family caregiver. With respect to mastectomy types, there was almost no difference between the experimental and the control group with simple mastectomy and radical mastectomy rate being reported, respectively, at 40.0% and 60.0% for the experimental group and 36.6% and 64.4% for the control group. The result of Chi-

square test confirmed that there was no statistically significant difference between both groups in these elements. The statistics are presented in table 4

Table 4 The characteristic of sample related to post mastectomy care

Characteristic	**Control group**	**Experimental group**	**Total**	**Chi-square χ^2**	**p-value**
	n=58 (%)	**n=57(%)**	**n=115(%)**		
Family care giver				0.19	0.66
Yes	48(83.4)	43(74.8)	91(89.1)		
No	10(16.6)	14(25.2)	24(20.9)		
Mastectomy type				1.92	0.16
Simple mastectomy	21(36.6)	23(40.0)	44(38.3)		
Radical mastectomy	37(64.4)	34(60.0)	71(61.7)		

3. Description of the quality of life post-mastectomy

3.1 The overall quality of life in participants

In this study, the mean scores of QOL in the control group at 3-weeks was average level of 6.58 (SD=.82), while in the experimental group, the mean score of QOL was good level of 7.60 (SD=.58). The result of the QOL level post-mastectomy in both groups is presented in table 5

Table 5 The level of quality of life at 3-weeks post-mastectomy in the experimental group and the control group

Group	Mean (SD)	Min-Max	Level
Experimental	7.60 (.58)	6.48 - 8.92	Good
Control	6.58 (.82)	4.76 - 8.52	Average

The result showed a significant difference in QOL between the control group and the experimental group at 3-weeks post-mastectomy. The QOL in the experimental group was higher than the QOL in the control group at 3-weeks post-mastectomy.

3.2 Hypothesis testing

The hypothesis of the study proposed that the QOL of women with breast cancer that participated in the UMP in addition to routine care was better than those receiving only routine care at 3-weeks post-mastectomy. To test the hypothesis, a comparison of QOL between the experimental group and the control group was presented as follows.

It was found that at 3-weeks post-mastectomy, the mean score of QOL in the experimental group was significantly higher than the mean score of QOL in the control group ($t=7.71$, $p <.001$).

In addition, each dimension of QOL was also compared between the experimental and control groups. It was found that 4 dimensions of QOL in the experimental group, namely psychological well-being, physical wellbeing, body image and social concerns, were significantly higher than those of the control group ($t=7.48$, 8.83, 4.37, and 6.25, $p < .001$). However, the treatment responses of women in both groups were not different at 3-weeks post-mastectomy.

In conclusion, the results showed that participants in the experimental group who joined the UMP and routine care had better QOL at 3-weeks post-mastectomy compared to those who only received routine care. The findings from this study supported the hypothesis that breast cancer post-mastectomy women who participated in the UMP and routine care had better QOL than the control group who –received only routine care at 3-weeks post-mastectomy.

The result of hypothesis testing is reported in table 6

Table 6 Comparison of QOL between the experimental group and the control group at 3-weeks post-mastectomy

QOL	Experimental group (n=57)		Control group (n=58)		Mean Difference	t-value	p-value
	Mean	SD	Mean	SD			
Psychological well-being	7.61	0.75	6.31	1.07	1.30	7.48	<.001
Physical well-being	7.41	0.85	5.84	1.04	1.57	8.83	<.001
Body image concerns	7.25	0.92	6.43	1.07	0.82	4.37	<.001
Treatment response	7.73	0.69	7.50	1.16	0.23	1.28	.230
Social concerns	8.11	1.20	6.58	1.40	1.53	6.25	<.001
QOL	7.60	0.58	6.58	0.82	1.02	7.71	<.001

4. Opinions of the participants

After participating in the program, the participants presented their opinions, which mostly concerned the practice of Qigong and their feelings. Summarily, the participants were satisfied with the program because it enhanced their knowledge and gave them opportunities to communicate and discuss their concerns with health care providers. The subjects additionally gave suggestions for making the program more helpful, such as that the program should start earlier, so that they could have enough time to learn and practice, or that drainage care education should be provided so they could note their drainage. Other subjects thought that the look-in-the-mirror task was too upsetting, although they acknowledged that the activity helped them know what happened to their bodies. They reported feeling safe because the nurses and researchers were with them when they viewed the incision site at 3-days post-mastectomy. One of them said, "If the nurses had not been there, I would have never dared to look at my scar." Most of the participants loved to practice Qigong; however, they mostly practiced breathing, hand moving, and concentrating. Some felt the other steps of Qigong were difficult to remember and practice because of post-surgical pain. Also, they expressed a desire to have family members join in the program with them. All felt that the program should be implemented for all women with breast cancer before mastectomy surgery.

CHAPTER V

DISCUSSIONS AND RECOMMENDATIONS

This chapter focuses on discussing 1) The effectiveness of Uncertainty Management Program on Quality of Life among Vietnamese women at 3-weeks post-mastectomy, 2 The limitations of the study, 3) Recommendations for further research, and 4) Contributions to nursing practice.

1. The Effect of the Uncertainty Management Program on QOL of breast cancer women at 3-weeks post-mastectomy

The UMP was developed based on the theoretical underpinnings of Mishel's Uncertainty in Illness Theory in 1988. It was composed of four main sections with the purpose of reducing the uncertainty of post-mastectomy women in order to improve their quality of life. In summary, the UMP helped women undergoing mastectomy improve their total QOL at 3-weeks post mastectomy. The UMP provided the knowledge and skills to manage physical and psychological symptoms post-mastectomy. Therefore, they understood and expected what happened to them. In addition, congruent with the theory, when the symptom pattern was expected, the uncertainty was reduced (Mishel, 1988). Among the study findings, the validity check result proved that after receiving the UMP, 93% of the subjects (n=58) were low uncertainty of their illness post-mastectomy, before hospital discharge. When the uncertainty was low, the women could manage themselves to cope with the illness and improve their QOL (Clayton et al., 2006). As a result, the women who received the UMP had higher total QOL mean score than those who received routine care at 3-weeks post-mastectomy significance ($p<0.05$). The study findings revealed that low

uncertainty post-mastectomy before discharge could improve QOL at 3-weeks post-mastectomy in breast cancer post-mastectomy women. It is congruence with existing studies that reducing uncertainty could help increase QOL in breast cancer survivors (Wonghongkul et al., 2006) and reducing uncertainty at 1-week post-surgery increases QOL in cancer patients (Valeria et al., 2014).

Regarding the dimensions of QOL at 3-weeks post-mastectomy, physical well-being, psychological well-being, body image and social concerns mean score in the experimental group were significantly higher than those in the control group ($p<0.05$). The treatment response was the only dimension that not different between the experimental and the control group.

The UMP would support the psychological well-being and physical well-being dimensions of QOL because these scores were higher in the experimental group at 3-weeks post-mastectomy compared to the control group. Physical well-being and psychological well-being were two important dimensions of QOL and many studies suggested interventions to improve these aspects. However, most of the previous interventions focused on QOL at chemotherapy, survival time and metastasis of breast cancer disease, not at mastectomy time. From this study, it has been found that the UMP enhanced physical and psychological well-being of women undergoing mastectomy 3-weeks, the initial period of post-surgery recovery. The findings pointed out both physical well-being and psychological well-being mean score were 7.41 (SD=.85) and 7.61(SD=.75) at 3-weeks post-mastectomy, respectively in the experimental group while it were 5.84 (SD=1.04) and 6.31 (SD=1.07) in the control group ($p<0.05$). This study result consistent with other the rationales that support

QOL at the early stage of treatment could increase the QOL (King et al., 2000; Mols et al., 2005).

The UMP can make effect on body image of post-mastectomy women. This assumption supported by the study result that body image mean score of the experimental subjects was 7.25 (SD=.92) while that score in the control group was 6.43 (SD=1.07) at 3-weeks post-mastectomy ($p<0.05$). This is congruent with the literature review that the art or mind therapeutic program and the cognitive behavior counseling program proved effective on body image (Freysteinson, 2009; Freysteinson et al., 2013; Fadaei et al., 2011). This finding supports evidence for a new intervention to reduce negative body image post-mastectomy and confirm the relationship of uncertainty and body image (Kim et al., 2016).

It was found from the result that the experimental subjects reported a higher score in social concerns compared to the control group at 3-weeks post-mastectomy in addition to the higher score of QOL. The women who participated in the UMP had more chances to contact with nurses, communicated with nurses and family members as well as the social network therefore could improve their perceived of social concerns and improved their QOL compared to those who received only routine care. The result was consistent with other studies that improving social support could increase both short-term and long-term QOL in breast cancer women (Leung et al., 2014; Salonen et al., 2013)

The UMP did not totally achieve the treatment response in post-mastectomy women. When we look at the independent t-test comparing the mean score of treatment response between the experimental group and the control group, the result showed no significant difference at 3-weeks post-mastectomy ($p=0.23$). However, this

finding did not imply that the UMP was not effective on treatment response. Considering the treatment response indicators, at 3-weeks post-mastectomy, the test showed that the experimental group had a better score in breast sensitivity and hand raising ability than the control group. In contrast, pain and frequency of pain scores were lower than the scores of the control group. This result implied that the UMP helped to reduce the muscle and shoulder stiffness so post-mastectomy women could increase their level of hand raising ability and reduced breast sensitivity. The UMP increased the ability of hand raising and reduced breast sensitivity in mastectomy women after 3-weeks post-mastectomy; however, the UMP was not effective on pain and frequency of pain post-mastectomy. This result was congruent with previous studies that post-mastectomy symptoms could be reduced by physical exercises, and Qigong practice; however, the effect of these interventions was only proved at 4-6 weeks post-mastectomy (Markdump, 2014; Van Dijck et al., 2016; Naik et al., 2016).

2. The limitation of the study

To test the effect of a nursing program in a clinical setting, the most favorable design is randomize control trial. As far as this study wanted to improve uncertainty in order to enhance quality of life post- mastectomy, the UMP should take place before the subjects underwent this event (Meleis et al., 2000; Mishel., 1988). Therefore, the pre-test before intervention could not be applied. Thus, the post-test only design was conducted. As a result of following the mastectomy schedule that subjects could not enrolled in the program at the same time, and the study only conducted in one setting, the pure randomization could not be used for this study.

Post-mastectomy stage lasted from 1 to 3 weeks since the surgery occurred to the beginning of chemotherapy treatment. Therefore, with the purpose of improving

quality of life at the early post-mastectomy stage, this study focused on examining only the post-mastectomy women's quality of life improvement at 3-weeks without further considering the effect of UMP on quality of life at later stages of the treatment process.

3. Recommendations for further research

To achieve the optimum effect for post mastectomy women in future, this study proposed two points focus on improving the UMP and the design of study. For the program, the UMP involved only nurses to support post-mastectomy women while the credible authorities of women with breast cancer includes nurses, family, or friends (Salonen et al., 2013). Therefore, although nursing support in the UMP was managed; family members or closest persons support what might have impacted to women at home should be added in further research.

Other healthcare providers included doctors and assistant nurses are the authorities that establish the quality of treatment response for post-mastectomy women. Therefore, practical nurses who directly care for post-mastectomy women should display the role of co-operation among nurses, doctors and other health care providers in order to get the achieve pain management procedure for post mastectomy women.

For the design, QOL is considered a dynamic concept, which might fluctuate in different stages of the breast cancer disease; further studies should be carried out to test the effects of the program on quality of life in a longitudinal design.

The UMP would be tested in the randomize control trials which take place in variety of settings to establish stronger evidence for the effect of the UMP on post mastectomy population.

4. Implication for nursing practice

The result of this study will be presented for the Oncology hospitals so that the managers of these hospitals consider about the benefits of the program on improving quality of care. Besides that, the strategies to apply the UMP are realistic showed. First, the booklet can be provided for breast cancer women at the admission time for mastectomy. Then at day 3 before mastectomy, the counseling nurses can provide information for women by using the information part of the UMP. This part includes the new knowledge of the UMP and information or policy of the Wards as routine care. Therefore practical nurses do not take separate time to counsel for women but provide UMP informational support part which enrich adequate information for women before mastectomy

The third part of UMP is the emotional support and look in to the mirror. This part can happen in the first dressing change for women, nurses can take more consideration for women at this time, encourage and communicate well to help them disclose their emotions in order to reduce negative body image.

Qigong was proved to bring healthy for breast cancer women in both physical and psychological aspects. It can be combined with the physical exercises practice for women at day 5 or day 7 in the hospital and instruction to practice at home. The rehabilitation nurses can teach Qigong for women before and after mastectomy follow the guideline in the booklet. The practice planning at home should make by nurses and women commitment so that they are responsible for practice educated skill at home to improve their quality of life.

Qigong not only helps breast cancer population but other groups of chronic disease, therefore, Qigong can be taught in the University for nursing students, so that they can experience the effect of Qigong and teach Qigong for the cancer populations to improve quality of life after major treatment.

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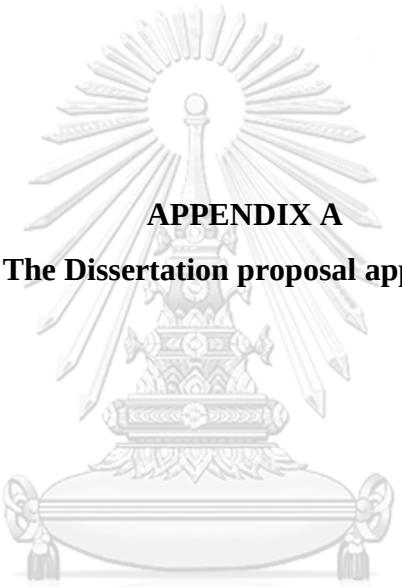
APPENDIX

APPENDIX A

The Dissertation proposal approval



ประกาศ
คณะพยาบาลศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
เรื่อง การอนุมัติหัวข้อดุษฎีนิพนธ์นิพนธ์ ครั้งที่ 12/2558 ประจำปีการศึกษา 2558

นิสิตผู้ทำวิจัยและอาจารย์ที่ปรึกษาดุษฎีนิพนธ์

รหัสนิสิต	5677401736
ชื่อ-นามสกุล	นางฉวน ฮา ทิ นู
สาขาวิชา	พยาบาลศาสตร์ (นานาชาติ)
ประธานกรรมการ	ศาสตราจารย์ ดร. สมจิต หนุเจริญกุล
อาจารย์ที่ปรึกษาหลัก	รองศาสตราจารย์ ดร. สุรีพร ธนศิลป์
อาจารย์ที่ปรึกษาร่วม	รองศาสตราจารย์ ดร. รัตน์ศิริ ทาโต
กรรมการ	รองศาสตราจารย์ ร.ต.อ.หญิง ดร. ยุพิน อังสุโรจน์
กรรมการ	ผู้ช่วยศาสตราจารย์ ดร. สุนิดา ปรีชาวงษ์
กรรมการภายนอก	ผู้ช่วยศาสตราจารย์ ดร. ณัฐกมล ชาญสาธิตพร
ชื่อหัวข้อดุษฎีนิพนธ์	ผลของโปรแกรมจัดการความไม่แน่นอนเกี่ยวกับคุณภาพชีวิตของผู้ป่วยหลังผ่าตัดเต้านม ในสาธารณรัฐสังคมนิยมเวียดนาม THE EFFECT OF UNCERTAINTY MANAGEMENT PROGRAM ON QUALITY OF LIFE AMONG POST MASTECTOMY PATIENTS IN VIETNAM
ครั้งที่อนุมัติ	12/2558
ระดับ	ปริญญาเอก

จากมติคณะกรรมการบริหารคณะพยาบาลศาสตร์ ครั้งที่ 10/2559 วันที่ 26 กรกฎาคม 2559

ประกาศ ณ วันที่ 29 กรกฎาคม พ.ศ. 2559

(รองศาสตราจารย์ ดร. สุรีพร ธนศิลป์)
คณบดีคณะพยาบาลศาสตร์

APPENDIX B

IRB Documents

MINISTRY OF HEALTH
UNIVERSITY OF MEDICINE AND
PHARMACY AT HO CHI MINH CITY

BOARD OF ETHICS IN BIOMEDICAL RESEARCH

Number: 463/UMP-BOARD
Re: accepted ethical issues of bimedical research

SOCIALIST REPUBLIC OF VIETNAM
Independence – Freedom – Happiness

Ho Chi Minh City, December 16th, 2016

APPROVAL FROM THE BOARD OF ETHICS IN BIOMEDICAL RESEARCH AT UNIVERSITY OF MEDICINE AND PHARMACY AT HO CHI MINH CITY

Pursuant to the Decision No. 1863/QĐ-BYT on May 27, 2009 of the Misnitry of Health issued the Regulation on organization and operation of the University of Medicine and Pharmacy at Ho Chi Minh City;

Pursuant to the Decision No. 5129/ QĐ-BYT on December 19, 2002 of the Minister of Health issued the Regulation on organization and operation of the Board of Ethics in Biomedical Research;

Pursuant to the Decision No 1238/QĐ-ĐHYD-TC on May 18, 2016 of the Rector of University of Medicine and Pharmacy at Ho Chi Minh City on the establishment of the Board of Ethics in Biomedical Research;

Based on the review of the permanent Board of Ethics in Biomedical Research at the University of Medicine and Pharmacy on December 15, 2016.

The Board of ethics has approved the research:

- Research title: *The effect of uncertainty management program on quality of life among post mastectomy patient in Vietnam.*
- Principal investigator: *Ha Thi Nhu Xuan*
- Oversight institution: *Chulalongkorn University, Thailand.*
- Study sites: *Ho Chi Minh City Oncology Hospital and National Cancer Hospital.*
- Studied period: *from 12/2016 to 6/2017.*
- Review category: *Expedited full.*

Effective approval date: *December 16th, 2016.*

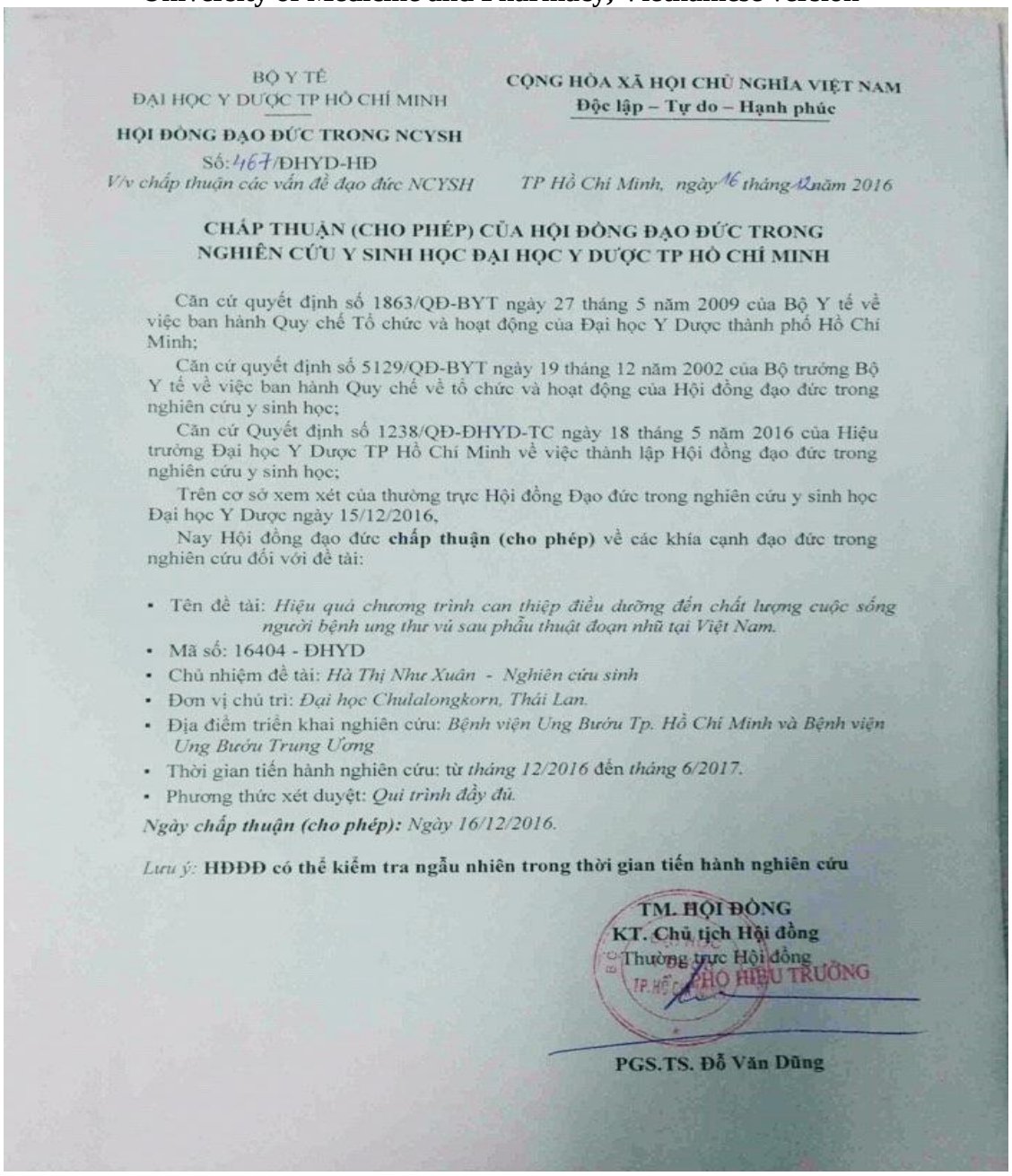
Note: **The Board of Ethics may randomly check during conducting the study.**

ON BEHALE OF THE BOARD OF ETHICS
PP. Chairman of the Board
Permanent Board

PHÓ HIỆU TRƯỞNG

Assoc.Prof.Dr. Do Van Dung

The IRB approval of the Board of Ethic in Biomedical Research in The University of Medicine and Pharmacy, Vietnamese version



BỘ Y TẾ
ĐẠI HỌC Y DƯỢC TP HỒ CHÍ MINH

HỘI ĐỒNG ĐẠO ĐỨC TRONG NCYSH

Số: 4167/ĐHYD-HĐ
V/v chấp thuận các vấn đề đạo đức NCYSH

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập – Tự do – Hạnh phúc

TP Hồ Chí Minh, ngày 16 tháng 12 năm 2016

CHẤP THUẬN (CHO PHÉP) CỦA HỘI ĐỒNG ĐẠO ĐỨC TRONG NGHIÊN CỨU Y SINH HỌC ĐẠI HỌC Y DƯỢC TP HỒ CHÍ MINH

Căn cứ quyết định số 1863/QĐ-BYT ngày 27 tháng 5 năm 2009 của Bộ Y tế về việc ban hành Quy chế Tổ chức và hoạt động của Đại học Y Dược thành phố Hồ Chí Minh;

Căn cứ quyết định số 5129/QĐ-BYT ngày 19 tháng 12 năm 2002 của Bộ trưởng Bộ Y tế về việc ban hành Quy chế về tổ chức và hoạt động của Hội đồng đạo đức trong nghiên cứu y sinh học;

Căn cứ Quyết định số 1238/QĐ-ĐHYD-TC ngày 18 tháng 5 năm 2016 của Hiệu trưởng Đại học Y Dược TP Hồ Chí Minh về việc thành lập Hội đồng đạo đức trong nghiên cứu y sinh học;

Trên cơ sở xem xét của thường trực Hội đồng Đạo đức trong nghiên cứu y sinh học Đại học Y Dược ngày 15/12/2016,

Nay Hội đồng đạo đức **chấp thuận (cho phép)** về các khía cạnh đạo đức trong nghiên cứu đối với đề tài:

- Tên đề tài: *Hiệu quả chương trình can thiệp điều dưỡng đến chất lượng cuộc sống người bệnh ung thư vú sau phẫu thuật đoạn nhũ tại Việt Nam.*
- Mã số: 16404 - ĐHYD
- Chủ nhiệm đề tài: *Hà Thị Như Xuân - Nghiên cứu sinh*
- Đơn vị chủ trì: *Đại học Chulalongkorn, Thái Lan.*
- Địa điểm triển khai nghiên cứu: *Bệnh viện Ung Bướu Tp. Hồ Chí Minh và Bệnh viện Ung Bướu Trung Ương*
- Thời gian tiến hành nghiên cứu: từ *tháng 12/2016* đến *tháng 6/2017.*
- Phương thức xét duyệt: *Qui trình đầy đủ.*

Ngày chấp thuận (cho phép): *Ngày 16/12/2016.*

Lưu ý: **HĐĐĐ có thể kiểm tra ngẫu nhiên trong thời gian tiến hành nghiên cứu**

TM. HỘI ĐỒNG
KT. Chủ tịch Hội đồng
Thường trực Hội đồng
PHÓ HIỆU TRƯỞNG

PGS.TS. Đỗ Văn Dũng

The IRB approval of the Oncology Hospital

SỞ Y TẾ TP. HỒ CHÍ MINH
BỆNH VIỆN UNG BƯỚU

Số : 295 /BVUB – CĐT

V/v cho phép GV. Hà Thị Như Xuân đến thực hiện đề tài nghiên cứu tại bệnh viện Ung bướu TP. HCM.

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập – Tự do – Hạnh phúc

TP. Hồ Chí Minh, ngày 16 tháng 02 năm 2017

Kính gửi: **ĐẠI HỌC Y DƯỢC TP. HCM**

Căn cứ giấy giới thiệu số 72/GGT-ĐHYD ngày 08/02/2017 của Đại học Y dược TP. HCM về việc cho phép Giảng viên Hà Thị Như Xuân – Bộ môn Điều dưỡng đến thực hiện đề tài nghiên cứu "Hiệu quả chương trình can thiệp điều dưỡng đến chất lượng cuộc sống người bệnh ung thư vú sau phẫu thuật đoạn nhũ" tại bệnh viện Ung bướu TP. HCM;

Xét đề nghị của Thư ký Hội đồng đạo đức trong nghiên cứu y sinh học cấp cơ sở - Bệnh viện Ung bướu TP. HCM trong tờ trình số 22 /HĐĐĐ-CĐT ngày 16 /02/2017 đã được Chủ tịch Hội đồng thông qua.

Nay Ban Giám Đốc Bệnh viện Ung bướu TP. HCM có ý kiến như sau:

❖ Cho phép Giảng viên Hà Thị Như Xuân đến thực hiện đề tài nghiên cứu nêu trên tại bệnh viện Ung bướu TP. HCM.

❖ Đề nghị chủ nhiệm đề tài thực hiện nghiêm túc đề cương nghiên cứu đã phê duyệt và thực hiện đúng nội qui bệnh viện trong thời gian làm đề tài tại bệnh viện Ung bướu TP. HCM.

Trân trọng,

KT. GIÁM ĐỐC
PHÓ GIÁM ĐỐC

BỆNH VIỆN UNG BƯỚU

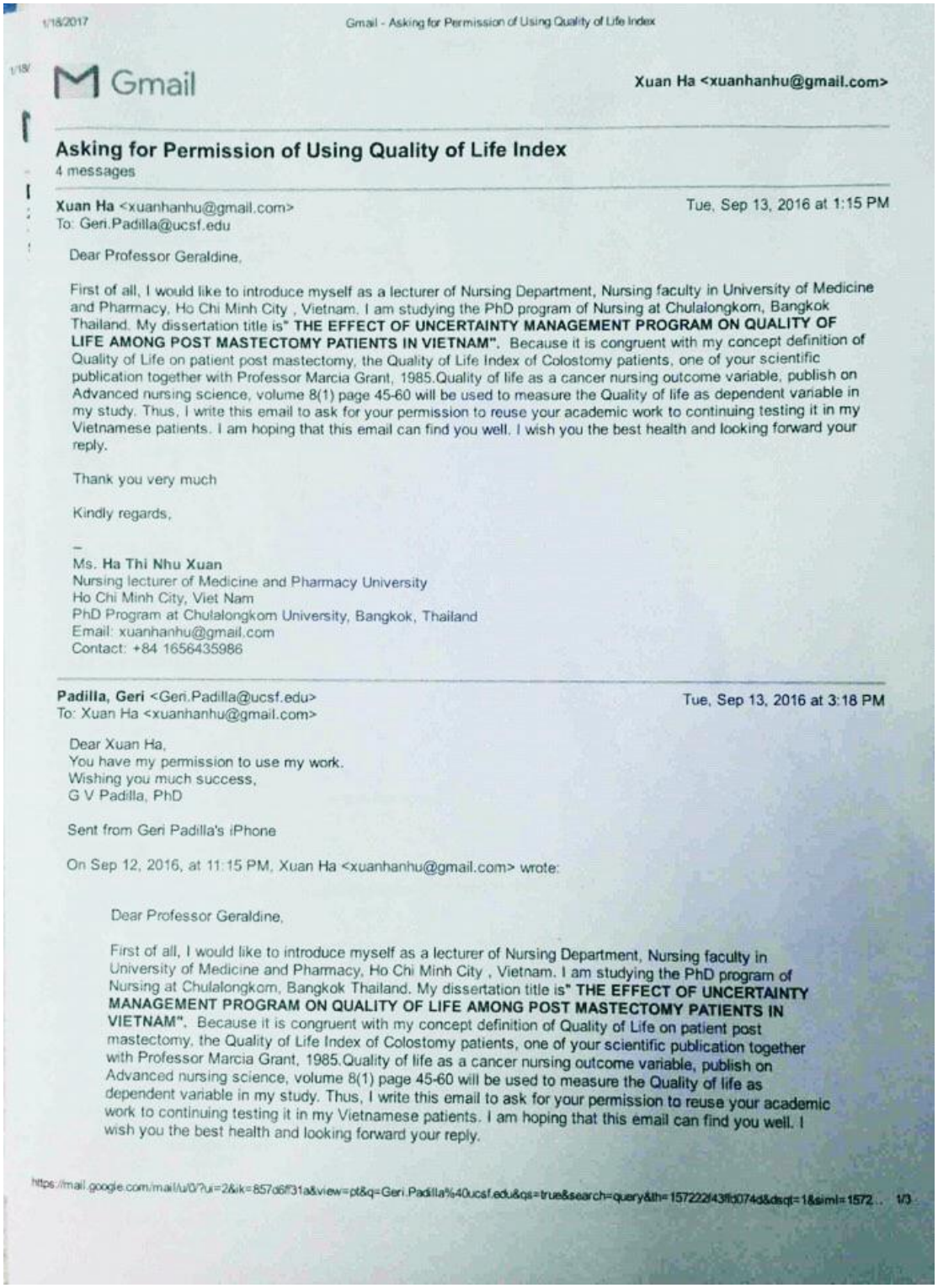
BS. Phạm Xuân Dũng

Nơi nhận:
- *Như trên;*
- *Lưu P.CĐT.*

APPENDIX C

Permission of instruments using

Permission of using Quality of Life Index



1/18/2017 Gmail - Asking for Permission of Using Quality of Life Index

Gmail

Xuan Ha <xuanhanhu@gmail.com>

Asking for Permission of Using Quality of Life Index

4 messages

Xuan Ha <xuanhanhu@gmail.com> Tue, Sep 13, 2016 at 1:15 PM
To: Geri.Padilla@ucsf.edu

Dear Professor Geraldine,

First of all, I would like to introduce myself as a lecturer of Nursing Department, Nursing faculty in University of Medicine and Pharmacy, Ho Chi Minh City , Vietnam. I am studying the PhD program of Nursing at Chulalongkorn, Bangkok Thailand. My dissertation title is" **THE EFFECT OF UNCERTAINTY MANAGEMENT PROGRAM ON QUALITY OF LIFE AMONG POST MASTECTOMY PATIENTS IN VIETNAM".** Because it is congruent with my concept definition of Quality of Life on patient post mastectomy, the Quality of Life Index of Colostomy patients, one of your scientific publication together with Professor Marcia Grant, 1985.Quality of life as a cancer nursing outcome variable, publish on Advanced nursing science, volume 8(1) page 45-60 will be used to measure the Quality of life as dependent variable in my study. Thus, I write this email to ask for your permission to reuse your academic work to continuing testing it in my Vietnamese patients. I am hoping that this email can find you well. I wish you the best health and looking forward your reply.

Thank you very much

Kindly regards,

–
Ms. **Ha Thi Nhu Xuan**
Nursing lecturer of Medicine and Pharmacy University
Ho Chi Minh City, Viet Nam
PhD Program at Chulalongkorn University, Bangkok, Thailand
Email: xuanhanhu@gmail.com
Contact: +84 1656435986

Padilla, Geri <Geri.Padilla@ucsf.edu> Tue, Sep 13, 2016 at 3:18 PM
To: Xuan Ha <xuanhanhu@gmail.com>

Dear Xuan Ha,
You have my permission to use my work.
Wishing you much success,
G V Padilla, PhD

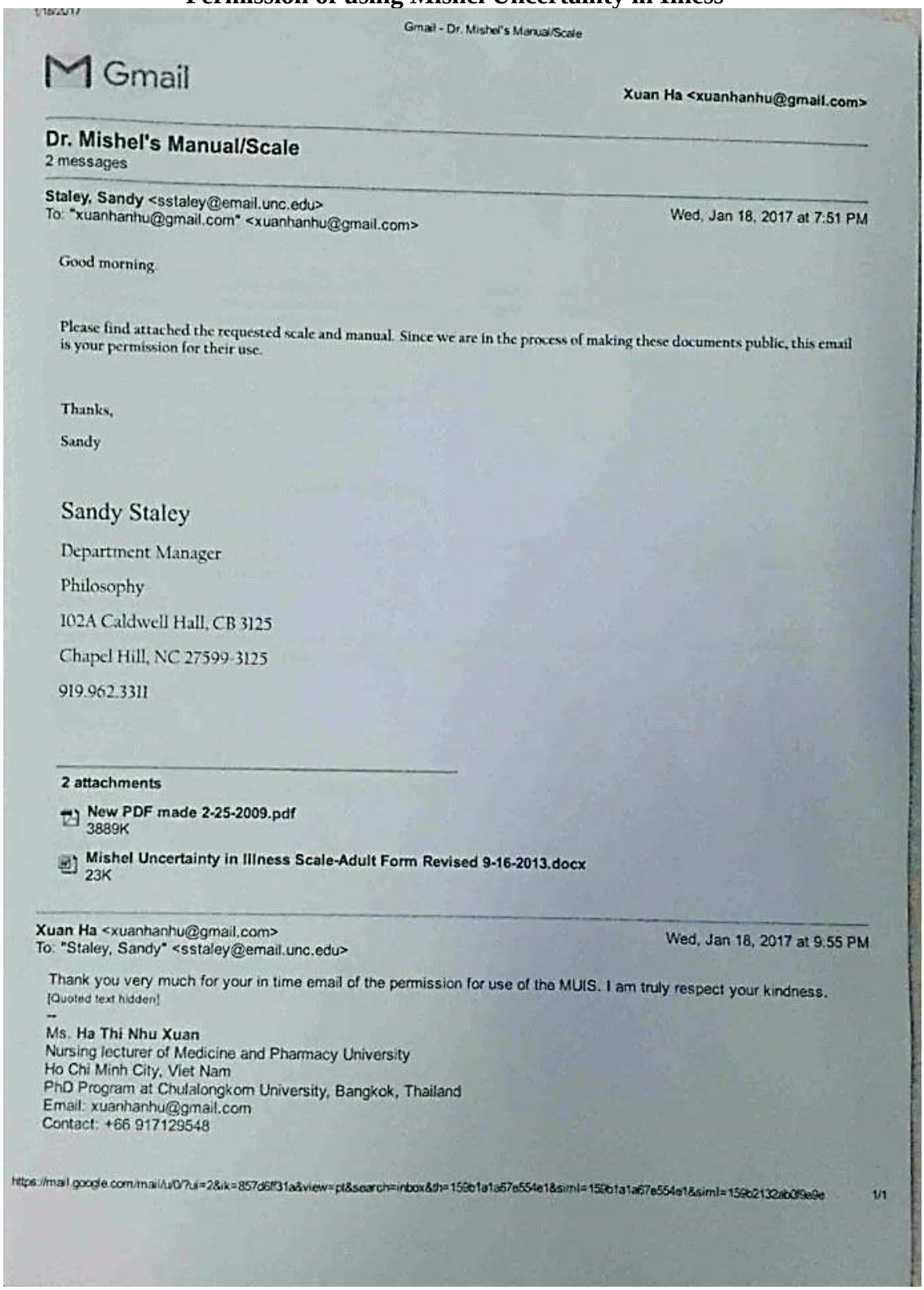
Sent from Geri Padilla's iPhone

On Sep 12, 2016, at 11:15 PM, Xuan Ha <xuanhanhu@gmail.com> wrote:

> Dear Professor Geraldine,
>
> First of all, I would like to introduce myself as a lecturer of Nursing Department, Nursing faculty in University of Medicine and Pharmacy, Ho Chi Minh City , Vietnam. I am studying the PhD program of Nursing at Chulalongkorn, Bangkok Thailand. My dissertation title is" **THE EFFECT OF UNCERTAINTY MANAGEMENT PROGRAM ON QUALITY OF LIFE AMONG POST MASTECTOMY PATIENTS IN VIETNAM".** Because it is congruent with my concept definition of Quality of Life on patient post mastectomy, the Quality of Life Index of Colostomy patients, one of your scientific publication together with Professor Marcia Grant, 1985.Quality of life as a cancer nursing outcome variable, publish on Advanced nursing science, volume 8(1) page 45-60 will be used to measure the Quality of life as dependent variable in my study. Thus, I write this email to ask for your permission to reuse your academic work to continuing testing it in my Vietnamese patients. I am hoping that this email can find you well. I wish you the best health and looking forward your reply.

https://mail.google.com/mail/u/0/?ui=2&ik=857d6f31a&view=pt&q=Geri.Padilla%40ucsf.edu&qs=true&search=query&th=157222f43ffc074d&dsqt=1&siml=1572... 1/3

Permission of using Mishel Uncertainty in Ilness



1/18/2017 Gmail - Dr. Mishel's Manual/Scale

Gmail

Xuan Ha <xuanhanhu@gmail.com>

Dr. Mishel's Manual/Scale
2 messages

Staley, Sandy <sstaley@email.unc.edu>
To: "xuanhanhu@gmail.com" <xuanhanhu@gmail.com> Wed, Jan 18, 2017 at 7:51 PM

Good morning.

Please find attached the requested scale and manual. Since we are in the process of making these documents public, this email is your permission for their use.

Thanks,

Sandy

Sandy Staley

Department Manager

Philosophy

102A Caldwell Hall, CB 3125

Chapel Hill, NC 27599-3125

919.962.3311

2 attachments

New PDF made 2-25-2009.pdf
3889K

Mishel Uncertainty in Illness Scale-Adult Form Revised 9-16-2013.docx
23K

Xuan Ha <xuanhanhu@gmail.com>
To: "Staley, Sandy" <sstaley@email.unc.edu> Wed, Jan 18, 2017 at 9:55 PM

Thank you very much for your in time email of the permission for use of the MUIS. I am truly respect your kindness.
[Quoted text hidden]
--
Ms. **Ha Thi Nhu Xuan**
Nursing lecturer of Medicine and Pharmacy University
Ho Chi Minh City, Viet Nam
PhD Program at Chulalongkorn University, Bangkok, Thailand
Email: xuanhanhu@gmail.com
Contact: +66 917129548

https://mail.google.com/mail/u/0/?ui=2&ik=857d6ff31a&view=pt&search=inbox&th=159b1a1a67e554e1&siml=159b1a1a67e554e1&siml=159b2132ab0f9e9e 1/1

APPENDIX D

Inform consent

(Vietnamese version)

BẢN THÔNG TIN DÀNH CHO ĐỐI TƯỢNG NGHIÊN CỨU VÀ CHẤP THUẬN THAM GIA NGHIÊN CỨU

Tên nghiên cứu: Hiệu quả chương trình can thiệp điều dưỡng đến chất lượng cuộc sống người bệnh ung thư vú sau phẫu thuật đoạn nhũ tại Việt Nam

Nhà tài trợ: Đại Học Chulalongkorn Thái Lan

Nghiên cứu viên chính: Hà Thị Như Xuân

Đơn vị chủ trì: Đại Học Chulalongkorn Thái Lan

I.THÔNG TIN VỀ NGHIÊN CỨU

Mục đích và tiến hành nghiên cứu

• Nghiên cứu này được tiến hành nhằm đánh giá hiệu quả của chương trình can thiệp điều dưỡng lên chất lượng sống của người bệnh sau phẫu thuật đoạn nhũ. Từ đó cung cấp bằng chứng khoa học về tính hiệu quả của chương trình điều dưỡng giúp nâng cao chất lượng cuộc sống của người bệnh ung thư vú sau phẫu thuật đoạn nhũ tại Việt Nam, đáp ứng đúng nhu cầu chăm sóc toàn điện cho người bệnh theo phương hướng phát triển và nâng cao chất lượng chăm sóc cho người bệnh của điều dưỡng chuyên khoa.

• Nghiên cứu sẽ được tiến hành tại các khoa ung thứ vú ở bệnh viện Ung bướu trung ương. Người bệnh sẽ được mời tham gia nghiên cứu khi nhập viện chuẩn bị phẫu thuật đoạn nhũ. Tất cả người bệnh ở độ tuổi từ 20-60 tuổi, được chỉ định đoạn nhũ 1 phần, toàn phần có nạo hạch hay không nạo hạch nách, tỉnh táo, có khả năng đọc và viết tiếng Việt. Tiêu chuẩn loại trừ là các đối tượng có chỉ định phẫu thuật đoạn nhũ nhưng có bệnh lý khác kèm theo, có các biến chứng nghiêm trọng sau phẫu thuật, đoạn nhũ có kết hợp tái tạo vú tức thời.

• Người bệnh thỏa tiêu chí chọn lựa đồng ý tham gia nghiên cứu sau khi được giải thích rõ về mục đích và phương thức nghiên cứu, ký vào giấy đồng thuận tham gia sẽ được rút thăm ngẫu nhiên vào 2 nhóm. Nhóm can thiệp sẽ tham gia vào chương trình can thiệp điều dưỡng UMP bao gồm giáo dục, cung cấp thông tin, hỗ trợ hướng dẫn thông tin về phẫu thuật đoạn nhũ và các biến chứng sau phẫu thuật, hỗ trợ về cảm xúc

sau mổ. Hướng dẫn kỹ năng giao tiếp với người thân và nhân viên y tế, hướng dẫn kỹ năng điều chỉnh và bộc lộ cảm xúc, phương pháp luyện khí công giúp tăng cường sức khỏe và ngừa biến chứng sau phẫu thuật, kỹ năng tự chăm sóc về dinh dưỡng và chăm sóc da tại nhà. Nhóm so sánh gồm người bệnh được chăm sóc theo quy trình thường quy tại các khoa bao gồm hướng dẫn , tư vấn thông tin trước và sau phẫu thuật, chăm sóc triệu chứng và các bài tập tay và vai sau phẫu thuật giúp làm giảm biến chứng và mau hồi phục. Người bệnh sẽ là nguồn cung cấp thông tin về chất lượng cuộc sống của họ sau khi phẫu thuật tại các thời điểm 3 tuần sau phẫu thuật bằng bộ câu hỏi vô danh. Kết quả nghiên cứu sẽ cho thấy hiệu quả của hai chương trình chăm sóc điều dưỡng đến chất lượng cuộc sống người bệnh.

Các nguy cơ và bất lợi

• Chương trình can thiệp điều dưỡng UMP nhằm cung cấp kiến thức, kỹ năng và các thông tin về bệnh tật cho người bệnh và thân nhân. Đây là chương trình giáo dục kết hợp được xây dựng dựa trên học thuyết của Merle Mishel năm 1988 và các tài liệu hướng dẫn của hội Điều dưỡng Ung thư Úc, và các chương trình can thiệp điều dưỡng đã được kiểm định hiệu quả bằng các nghiên cứu khoa học cụ thể. Bằng chứng về hiệu quả của chương trình can thiệp điều dưỡng này lên chất lượng cuộc sống của người bệnh đã được phổ biến trên nhóm bệnh nhân ung thư vú, các nhóm ung thư khác một cách rộng rãi ở cả châu Âu và châu Á. Người tham gia nghiên cứu sẽ được hỗ trợ về kiến thức, kỹ năng về việc tự chăm sóc cả về thể chất lẫn tinh thần nhằm nâng cao chất lượng cuộc sống sau phẫu thuật.

• Cả hai chương trình can thiệp UMP và quy trình thường quy đều giúp nâng cao sức khỏe và chất lượng cuộc sống của người bệnh

• Những người tham gia nghiên cứu sẽ được tặng một cuốn sách hướng dẫn kỹ năng và kiến thức về việc chăm sóc sau phẫu thuật tại nhà như một phần quà từ người nghiên cứu sau khi nghiên cứu kết thúc.

Người liên hệ

• Họ tên, số điện thoại người cần liên hệ: Hà Thị Như Xuân, SDT: 01656435986

Sự tự nguyện tham gia

Người tham gia nghiên cứu là hoàn toàn tự ngyện, không có gì ảnh hưởng đến chất lượng chăm sóc của người bệnh nếu họ không đồng ý tham gia nghiên cứu. Trong quá trình tham gia nghiên cứu, người tham gia có thể yêu cầu ngừng tham gia bất cứ khi nào họ muốn vì bất cứ lý do gì. Nghiên cứu viên đảm bảo việc tham gia hay không tham gia vào nghiên cứu sẽ không làm ảnh hưởng gì đến người bệnh trong quá trình họ được chăm sóc tại bệnh viện.

Tính bảo mật

Thông tin mà người bệnh cung cấp sẽ được bảo mật vì họ không cần điền tên vào bảng câu hỏi trả lời. Thông tin chỉ được dùng cho mục đích nghiên cứu và không dùng cho các mục đích gì khác. Thông tin được bảo mật trên máy tinh cá nhân bằng file mật mã và chỉ có người làm nghiên cứu và người hướng dẫn tiếp cận với thông tin này.

II. CHẤP THUẬN THAM GIA NGHIÊN CỨU

Tôi đã đọc và hiểu thông tin trên đây, đã có cơ hội xem xét và đặt câu hỏi về thông tin liên quan đến nội dung trong nghiên cứu này. Tôi đã nói chuyện trực tiếp với nghiên cứu viên và được trả lời thỏa đáng tất cả các câu hỏi. Tôi nhận một bản sao của Bản Thông tin cho đối tượng nghiên cứu và chấp thuận tham gia nghiên cứu này. Tôi tự nguyện đồng ý tham gia.

Chữ ký của người tham gia:

Họ tên_____ Chữ ký_____

Ngày tháng năm_____

Chữ ký của Nghiên cứu viên/người lấy chấp thuận:

Tôi, người ký tên dưới đây, xác nhận rằng bệnh nhân/người tình nguyện tham gia nghiên cứu ký bản chấp thuận đã đọc toàn bộ bản thông tin trên đây, các thông tin này đã được giải thích cặn kẽ cho Ông/Bà và Ông/Bà đã hiểu rõ bản chất, các nguy cơ và lợi ích của việc Ông/Bà tham gia vào nghiên cứu này.

Họ tên _____ Chữ ký_____

Ngày tháng năm_____

APPENDIX E

Research Instruments

The Personal Data Form

Mã số:

Bệnh viện:

Loại phẫu thuật: Đoạn nhũ ☐ Đoạn nhũ nạo hạch ☐

Giai đoạn ung thư: Giai đoạn II ☐ Giai đoạn III ☐ Hơn giai đoạn III ☐

THÔNG TIN CÁ NHÂN

Xin quý vị dành chút thời gian để trả lời một số câu hỏi nhằm cung cấp một số thông tin cá nhân của quý vị giúp đóng góp cho việc xác định những yếu tố liên quan đến chất lượng sống sau phẫu thuật cắt vú của qúy vị được đánh giá chính xác hơn. Thông tin trên đây được bảo mật và chỉ dùng vào mục đích nghiên cứu. Kính mong quý vị đánh dấu đầy đủ những thông tin bên dưới đây một cách xác thực nhất.

Tuổi: 30-39 ☐ 40-59 ☐ 50-59 ☐

Tình trạng hôn nhân: Kết hôn ☐ Góa chồng ☐ Ly thân ☐ Ly dị ☐ Độc thân ☐

Trình độ học vấn: cấp I ☐ cấp II ☐ cấp III ☐ Đại học ☐ Sau đại học ☐

Nghề nghiệp :
……...

Địa chỉ :
……

SDT:
……
.

Thu nhập bình quân hàng tháng: < 3.000.000vnd ☐ 3.000.000 -7.000.000vnd ☐

7.000.000-10.000.000 ☐ >10.000.000vnd ☐

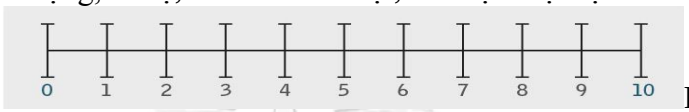
Có người thân chăm sóc: Có ☐ Không ☐

Loại phẫu thuật đoạn nhũ: Nạo hạch nách ☐ Không nạo hạch nách ☐

The Quality Of Life Index Vietnamese Version
BỘ CÔNG CỤ CHẤT LƯỢNG SỐNG CỦA NGƯỜI BỆNH SAU PHẪU THUẬT ĐOẠN NHŨ NẠO HẠCH

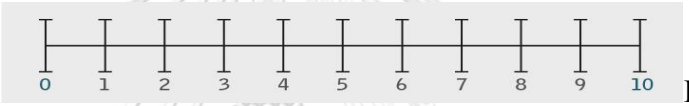
Hướng dẫn: Bạn hãy đọc kỹ các câu hỏi đưới đây. Sau đó đánh dấu "X" vào thang đo từ 0 đến 10 bên dưới. Mức độ đo lường sẽ tương ứng với các con số tăng dần từ 0 (Hoàn toàn không) đến 10 (Hoàn toàn đồng ý/Hoàn toàn đầy đủ). Bạn có thể đánh dấu vào bất kì vị trí nào trên thang đo đúng nhất với suy nghĩ của bạn tại thời điểm trả lời câu hỏi. Xin bạn vui lòng trả lời đầy đủ các câu hỏi trong bộ câu hỏi này

1. Khả năng vận động, đi bộ, cầm nắm đồ vật, của bạn hiện tại ở mức độ nào?

Rất yếu sức 

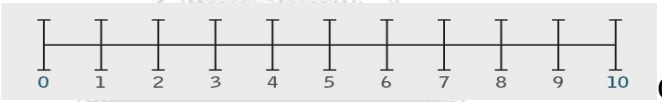
Rất mạnh mẽ

2. Bạn ngủ được bao nhiêu so với nhu cầu của bạn?

Hoàn toàn không 

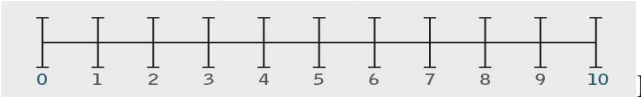
Hoàn toàn đủ

3. Bạn cảm thấy lo lắng về cân nặng hiện tại của bạn thế nào ?

Hoàn toàn không 

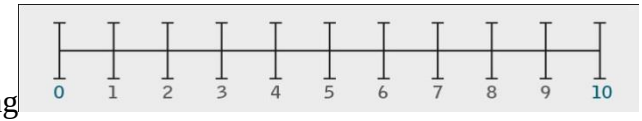
Cực kỳ lo lắng

4. Bạn ăn ngon miệng ở mức độ nào ?

Hoàn toàn không 

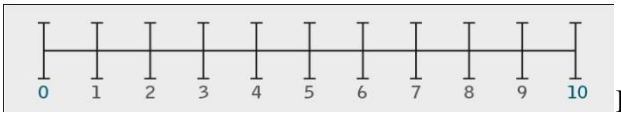
Hoàn toàn đồng ý

5. Bạn ăn uống được bao nhiêu so với nhu cầu của bạn?

Hoàn toàn không 

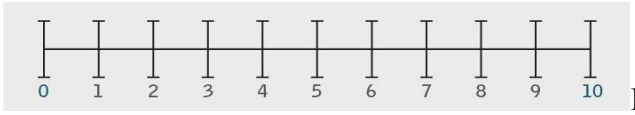
Hoàn toàn đầy đủ

6. Bạn có thể làm được bao nhiêu phần các công việc thường ngày bạn hay làm như việc nhà, việc công sở, chăm sóc sân vườn?

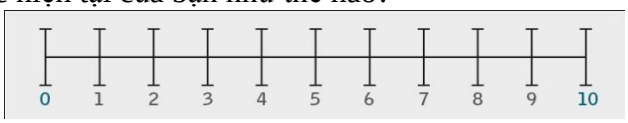
Hoàn toàn không 

Hoàn toàn đầy đủ

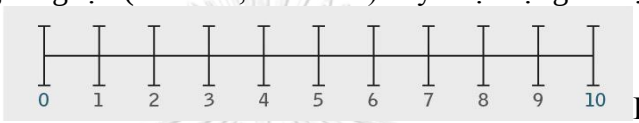
7. Mức độ sinh hoạt tình dục của bạn hiện tại có đáp ứng nhu cầu của bạn?

Hoàn toàn không  Hoàn toàn đầy đủ

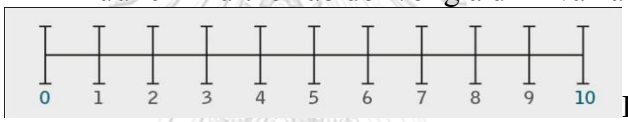
8. Tình trạng sức khỏe hiện tại của bạn như thế nào?

Cực kì tệ  Cực kì tốt

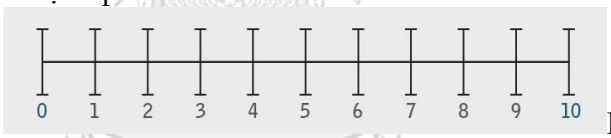
9. Bạn vui bao nhiêu khi làm các việc mà bạn yêu thích (đọc sách, nghe nhạc, chat với bạn bè, hoạt động sáng tạo (vẽ tranh, làm thơ..) hay hoạt động xã hội, cộng đồng?

Hoàn toàn không  Hoàn toàn đầy đủ

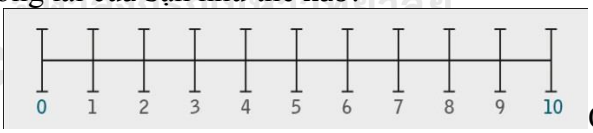
10. Bạn cảm thấy mình hữu ích như thế nào đối với gia đình và xã hội?

Hoàn toàn không  Hoàn toàn hữu ích

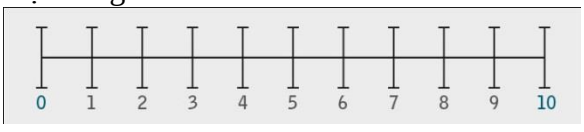
11. Bạn cảm thấy mình hạnh phúc bao nhiêu ?

Hoàn toàn không  Hoàn toàn đầy đủ

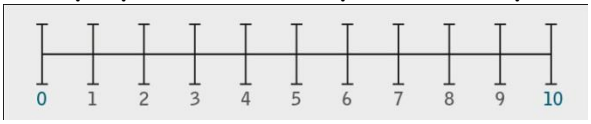
12. Bạn lo lắng về tương lai của bạn như thế nào?

Hoàn toàn không  Cực kì lo lắng

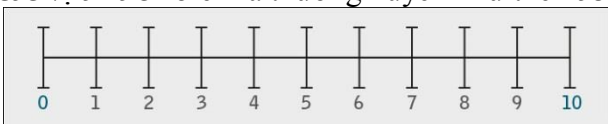
13. Bạn hài lòng với cuộc sống của mình bao nhiêu?

Hoàn toàn không  Hoàn toàn hài lòng

14. Vùng cánh tay, vai và tại vị trí vết mổ của bạn đau mức độ nào?

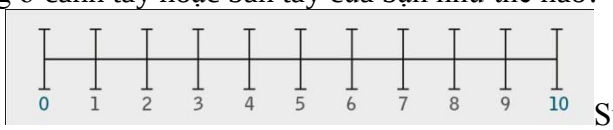
Hoàn toàn không  Cực kì đau

15. Tình trạng đau ở các vị trí trên diễn ra thường xuyên như thế nào?

Hoàn toàn không 

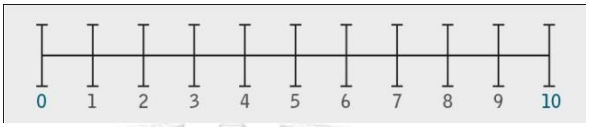
Luôn luôn đau

16. Mức độ phù, sưng ở cánh tay hoặc bàn tay của bạn như thế nào?

Hoàn toàn không 

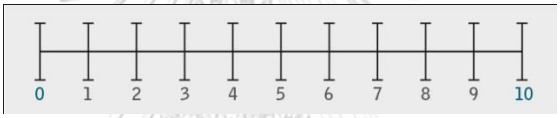
Sưng cực kì to

17. Mức độ khó khăn khi bạn nâng, dạng và đưa cánh tay bên mổ sang trái,phải như thế nào ?

Hoàn toàn không 

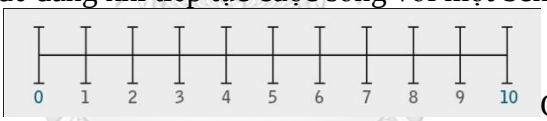
Cực kì khó khăn

18. Vú đã cắt bỏ của bạn có hiện tượng nhạy cảm (tê bì, châm chích, ngứa, kiến bò) thế nào?

Hoàn toàn không 

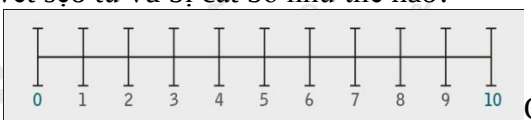
Cực kì nhạy cảm

19. Bạn có cảm thấy dễ dàng khi tiếp tục cuộc sống với một bên vú vị cắt bỏ?

Hoàn toàn không 

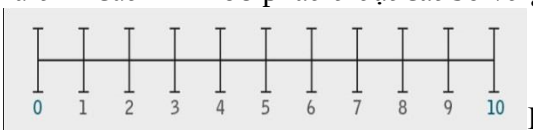
Cực kì dễ dàng

20. Bạn cảm thấy sợ vết sẹo từ vú bị cắt bỏ như thế nào?

Hoàn toàn không 

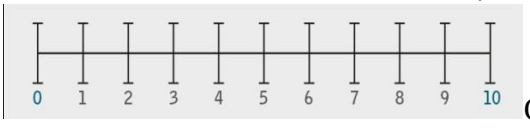
Cực kì sợ hãi

21. Bạn cảm thấy sự nữ tính của mình do phẫu thuật cắt bỏ vú giảm đi bao nhiêu?

Hoàn toàn không 

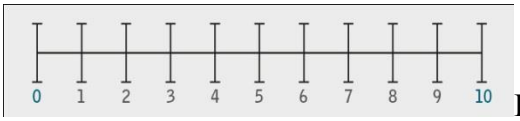
Hoàn toàn đồng ý

22. Bạn cảm thấy khó khăn thế nào khi nhìn hình ảnh vú bị cắt bỏ của bạn?

Hoàn toàn không 

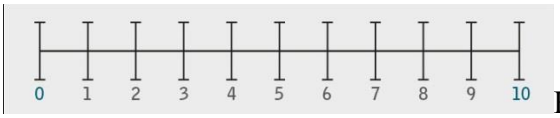
Cực kì khó khăn

23. Mức độ gặp gỡ bạn bè, người thân của bạn như thế nào so với trước khi mổ cắt tuyến vú?

Hoàn toàn không 

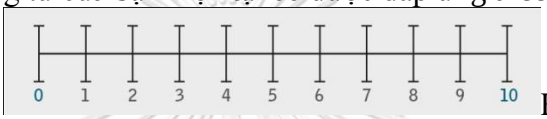
Hoàn toàn đầy đủ

24. Bạn có cảm thấy bị chối bỏ, xa lánh từ gia đình, bạn bè, người thương của mình không?

Hoàn toàn không 

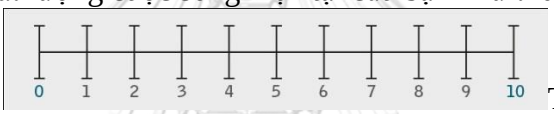
Hoàn toàn đồng ý

25. Sự thoải mái, riêng tư của bạn hiện tại có được đáp ứng theo nhu cầu không?

Hoàn toàn không 

Hoàn toàn đầy đủ

26. Bạn đánh giá chất lượng cuộc sống hiện tại của bạn như thế nào?

Cực kì tệ 

Thật tuyệt vời

The validity check of the program MUIS-SF
SAU KHI THAM GIA VÀO CHƯƠNG TRÌNH GIÁO DỤC SỨC KHỎE BẠN ĐÁNH GIÁ NHƯ THẾ NÀO VỀ NHỮNG VẤN ĐỀ LIÊN QUAN ĐẾN SỨC KHỎE VÀ BỆNH CỦA MÌNH.

(XIN QUÝ VỊ VUI LÒNG ĐÁNH DẤU X VÀO CÁC MỨC ĐỘ TƯƠNG ỨNG VỚI SUY NGHĨ CỦA QUÝ VỊ CHO TỪNG CÂU HỎI)

1. Tôi hiểu rõ các thông tin về bệnh tật của mình

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

2. Tôi dự đoán được điều gì sẽ diễn ra với bệnh của tôi

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

3. Tôi biết về quá trình và hiệu quả điều trị bệnh của mình

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

4. Tôi dự đoán được cảm xúc của mình và biết cách làm chủ cảm xúc

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

5. Khi tôi bị đau, sưng ở vai và ngực tôi biết tại sao nó diễn ra và làm thế nào để giảm triệu chứng này

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

6. Tôi có thể chăm sóc bản thân sau khi xuất viện

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

7. Tôi có thể giao tiếp và tìm sự giúp đỡ từ nhân viên y tế

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

8. Tôi có thể chia sẽ những vấn đề của mình với người thân, bạn bè và xã hội

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

9. Tôi có kế hoạch cho cuộc sống của mình trong tương lai

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

10. Tôi cảm thấy sức khỏe của mình dần cải thiện hơn

Rất đồng ý	Đồng ý	Không xác định	Không đồng ý	Rất không đồng ý
(5)	(4)	(3)	(2)	(1)

The program manual of UMP

TEACHING PLAN OF THE UNCERTAINTY MANAGEMENT PROGRAM

SECTION I: Information, physical and emotional support

Information:

1. Lessons:
   - ✓ Mastectomy surgery – knowledge and caring
   - ✓ Emotional management post mastectomy
   - ✓ Communicate with healthcare providers and family
   - ✓ Physical activities and Qigong technique
2. Participants: Patients before mastectomy group 20 patients
3. Time: 3 day before mastectomy
4. Duration: 90 minutes
5. Place: Consulting Room
6. Teacher: Ha This Nhu Xuan
7. Assistant: Ms Huynh Thi Cam Tien

Lesson 1: Mastectomy surgery –knowledge and caring

Content

1. Mstectomy surgery, the classification, choice, and procedure of this surgery
2. Complications and emotions post mastectomy
3. Nutrition and Skin care post mastectomy

Preparation

1. Power point presentation by teacher
2. Booklet: Printing booklet provide for patients
3. Computer and projector
4. Video of Qigong
5. Room and chairs

Development pathways

1. Cognition: Reading, watching, listening, ask & answer
2. Physical: talking, performing
3. Language: language and non-language methods
4. Psychological: Example of real cases, sharing experiences, evidences

Instructional strategies

1. Providing recognition
2. Identifying similarities and differences
3. Questions, cues, and advance organizers
4. Summarizing and note taking
5. Cooperative learning

Consume time 30 minutes

Content	Time	Teacher activities	Patients activities	Subordinate tips
What is Mastectomy?	5	Question: Have you ever heard about Mastectomy? What is it? What you have known about it? Response to patients	Answer the question Show their own knowledge	Consider the right or wrong knowledge of patients about mastectomy

		answer Present the definition of Mastectomy on PPT base on evidences Classification of mastectomy	first, critique others Listen to teacher	based on evidence
How to prepare mastectomy	5	Question: Do you know how to prepare for your-self before mastectomy? Response to patients answer Present the picture and guideline of Surgical oncology ward for pre-mastectomy patient	Answer the question Show their own knowledge first, and listen and critique others Listen to teacher	Identify the right and wrong thing follow guideline
How to do mastectomy	5	Present what happen on the day of mastectomy	Listen and following the content of PPT, showing pictures	Most patients like to see pictures in surgical room (which they might have never known before) to expect what will happen with them
What happen post mastectomy	5	What do you think you will look like post mastectomy? What complications you will have? What emotion may occur for you? Present the PPT contents	Patients follow the content of PPT, ask question	Ask for patient's knowledge Following the content in PPT Pictures of some complication and wound, drainage post mastectomy.
How to take care of your physical function, hygiene, nutrition and skin post mastectomy	10	Present the content of physical exercises, hygiene, nutrition, and skin care on PPT	Patients follow the content of PPT and booklet	Note the important points on physical exercises, hygiene, nutrition care and skin care post mastectomy

Lesson 2: Emotional disclose post mastectomy

Content

1. What are negative emotion post mastectomy
2. How to disclose or release negative emotion post mastectomy

Preparation

1. Power point presentation by teacher
2. Booklet: small booklet provide for patients
3. Paper and crayon, sticker samples
4. Computer and projector
5. Room and chairs

Development pathways

1. Cognition: Reading, listening, answer, question, writing, drawing
2. Language: language and non-language methods
3. Psychological: Example, real cases, stimulation, tell story

Instructional strategies

1. Providing recognition
2. Practicing sample
3. Questions, cues, and advance organizers
4. Summarizing and note taking
5. Cooperative learning

Teaching time: 15 minutes

Content	Time	Teacher activities	Patients activities	Tips
What is the impact of negative emotion to quality of life	5	What will happen if you feel stress, distress, and depression?	Answer the question Show their own opinions first ,listen to others and teacher	Consider the right or wrong knowledge about negative emotion impact based on evidence
Method to disclose negative emotions	10	Present the effective method to disclose negative emotion by PPT based on evidences. Guiding patient practice writing emotion word on paper Guiding patient practice color the circle by the indicate color	Doing the exercises of teacher Present or tell individual's story and experiences	Explain and reflect some writing or picture of patients. Note the main methods to express feeling

Lesson 3: Communication with healthcare providers and family members				
Content				
1. Role of each staff on the Surgical Oncology Ward like doctors, nurses, nurse assistants 2. Question to ask for information related to disease and choices 3. Information of disease treatment and prognosis				
Preparation				
1. Power point presentation by teacher 2. Booklet: small booklet provide for patients 3. Computer and projector 4. Room and chairs				
Development pathways				
1. Cognition: Reading, listening, answer, question 2. Language: language and non-language methods 3. Psychological: story, examples, experience, evidence				
Instructional strategies				
1. Providing recognition 2. Questions and answer 3. Summarizing and note taking 4. Cooperative learning				
Consumme time 30 minutes				
Content	Time	Teacher activities	Patients activities	Tips
Roles of doctors, nurses, assistant s nurses in the wards	5	Question: Do you think you have enough information need from doctors and nurses? Do you know what is the different between the staffs on the ward? Response to patients answer Present the role of some special staff who directly treat and care for patients	Answer the question Show their own opinions , experiences Listen to teacher	Patients should ask right question for right staff
Question should be ask before and after mastectomy	5	Present some question should be ask before and after mastectomy to get sufficient information Do you think what question that you can ask doctors or nurses Will you ask these question for staff When is suitable time to ask question	Patients listen and discuss or express their thinking about the question	Will the patients ask these providing question?
How to communicate or talking with family members	5	Present what patients should prepare and expect before talking to their family Presenting feeling of family members	Patients tell experiences	

Lesson 4: Qigong technique

1. Lesson: Qigong technique for mastectomy patients
2. Participants: Patients before mastectomy
3. Time: 3 day before mastectomy
4. Duration: 60 minutes
5. Place: Conference Room
6. Teacher: Ha This Nhu Xuan

Objectives

1. Patients are able to understand the effective of Qigong on health
2. Patients are able to remember and practice all step of Qigong technique
3. Patients are able to do Qigong technique independently after teaching

Preparation

1. Power point presentation by teacher
2. Video tape translate into Vietnamese
3. Case study: example
4. Assistants: two nurses in the ward
5. Booklet: small booklet provide for patients
6. Computer and projector
7. Room and chairs

Development pathways

1. Cognition: Reading, watching, listening, answer, question
2. Physical: action, doing, talking, performing
3. Language: language and non-language methods
4. Psychological: Example, real cases, stimulation, story

Instructional strategies

1. Providing recognition
2. Setting objectives and providing feedback
3. Questions, cues, and advance organizers
4. Summarizing and note taking
5. Homework and practice

Consume time 30 minutes

Content	Time	Teacher activities	Patients activities	Subordinate tips
What is Qigong	5	Question: have you ever heard about Qigong? What is it? Response to patients answer Present the definition of Qigong on PPT base on evidences History of Qigong Classification of Qigong	Answer the question Show their own opinions first, critique others Listen to teacher	Consider the right or wrong knowledge about Qigong based on evidence

Impact of Qigong	5	Question: Do you think Qigong important? Why? Response to patients answer Present the effective of Qigong on PPT based on evidences Qigong exercises help maintain health by creating a state of mental and physical calmness, which indicates that the Qi energy is balanced and harmonious Qigong can help manage the illness by stimulate circulation and support energy for the body Qigong can reduce the complication of stiffness and pain in shoulder.	Answer the question Show their own opinions first, and listen and critique others Listen to teacher	Conclude the role of Qigong based on evidence
How to do Qigong	5	Present the preparation before doing Qigong Present all part of Qigong Part 1. Warm-up Part 2. Four position of Qigong Present how to do each step by picture and instruction on PPT Present how to do Qigong by full video	Listen and following the content of PPT Watching video Imitate the pictures Watching video	Most patients like to see picture, listen to music or instruction, equipment's, How they like the vide
Applied Qigong practice	15	Assign patients in 4 group lines. Each line stands cross X so every people can see the screen. Patients imitate the positions of each step follow the PPT until they remember it Patients follow and practice together with the video after they remember the step. Two teacher and assistants help to correct the position	Group practice Group correction Group discussion	Checklist of Qigong step practice Assess and critique for each group

		of patients When patients remember step. They will present in group. Patients in each group will present. The others will use the knowledge they learn about Qigong to give comment for others		

Reflection for section I
Reflection form will transfer to patients at the end of the section.

1. Describe: What you have learnt from this class?
2. Analyze: How much useful of this class to you?
3. Reflect: How do you feel after this class?
4. Suggestions: What do you suggest to make this class better?

Describe: What you have learnt from this class?
Analyze: How much useful of this class to you?
Reflect: How do you feel after this class?
Suggestions: What do you suggest to make this class better?

SECTION II: Body image concern and physical practice

Information:

1. Content:
   - Support body image concern
   - Practice physical exercises and Qigong
2. Participants: Patients before mastectomy group 5-7patients
3. Time: 3 day post mastectomy
4. Duration: 30 minutes
5. Place: Wound care room /patient room
6. Teacher: Ha This Nhu Xuan
7. Assistant: Ms Huynh Thi Cam Tien

Supporting body image concern

Objectives

1. Patient feel comfortable to look their body and scar in the mirror
2. Patient able to accept the change in their body
3. Patient can express their feeling to nurses

Preparation

1. Mirrors,
2. Room and chairs

Development pathways

1. Cognition: Seeing, touching, feeling when look on mirror
2. Psychological: talking, ask question and reflect the feeling

Instructional strategies

1.Providing recognition
2.Listening

Contents: Consume time 10 minutes

Content	Time	Teacher activities	Patients activities	Subordinate tips
What do you feel when look on the mirror?	5	Question Response to patients answer by listening carefully. Calming down or touching to hand Measure the emotion of patient by noting words.	Answer the question Show their own feeling	Consider the level of negative body image concern
Can you accept your body changes?	5	Question Response to patients answer Remind the methods to disclose negative feeling on the lesson that patients have learnt	Show their own feeling Present the experience and knowledge of emotion disclose	Identify the right and wrong way that patient follow guideline

Qigong practice
Objectives
1. Patients can practice hand and elbow exercises right and effective 2. Patients can practice Qigong breathing, mind controlling effective
Preparation
1. Room and place to practice
Development pathways
1. Cognition: remind knowledge 2. Physical : practice step follow guideline
Instructional strategies
1. Remind step, performing step 2. Independent practice 3. Assess by checklist of each step
Refection Checklist of Qigong practice

Check list of physical exercise or Qigong format

Activities	Criteria of preferment	Good	Moderate	Need to adjust
Step 1	**……..**	✓		
Step 2	**……..**			✓
Step 3			✓	

SECTION III: Remind knowledge and practice Qigong before discharge

Information:
1. Remind knowledge of the program 2. Practice Qigong technique 3. Set up the home plan 4. Participant: group of 5-7 5. Teacher: Ha Thi Nhu Xuan 6. Place: consulting room 7. Duration 30 mintues
Remind knowledge of the program
Objectives
1. Patient able to know how to practice physical exercises, hygiene, nutrition and skin care at home, feel comfortable and accept their body changes
Development pathways Cognition: Question the knowledge that patients know about nutrition, skincare, emotion disclose, communication with others. Physical : Qigong full technique
Set up home planning
Objectives Patient able to continuously practicing the exercise and Qigong at home base on their ability, timetable. Teacher and patient can follow up what patient do at home
Development pathways Cognition: Set up the schedule with patient individually each week, appointment for the calling and submit the schedule check at the first follow up Physical : Physical exercises and Qigong technique, 30 minute/each time Psychological: stick the sticker on each day to show your health and your feeling Examples.   

The booklet

KIẾN THỨC VÀ KỸ NĂNG TỰ CHĂM SÓC CHO NGƯỜI BỆNH UNG THƯ VÚ SAU PHẪU THUẬT ĐOẠN NHŨ

CHƯƠNG TRÌNH THỰC HÀNH CHĂM SÓC ĐIỀU DƯỠNG

ĐẠI HỌC CHULALONGKORN THÁI LAN

Tác giả. NCS. Hà Thị Như xuân

Người hướng dẫn. PGS.TS Sureeporn Thanasilp

PGS. TS Ratsiri Thato

Thành phố Hồ Chí Minh, 2017

The evaluation form for practice at home

Week I		Mon	Tue	Wed	Thus	Fri	Sat	Sun
	Physical exercises (10 minutes)	✓		✓		✓		
	Qigong (30 minutes)	✓		✓		✓		
	Feeling	Sad sticker		Happy sticker		Angry sticker		
Phone call with researcher								
Week II	Physical exercises							
	Qigong							
	Feeling							
Phone call with researcher								

The DVD of Qigong

APPENDIX F
Assumptions Test

Test normality of the control group T1

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
ConT1	58	100.0%	0	.0%	58	100.0%

Descriptives

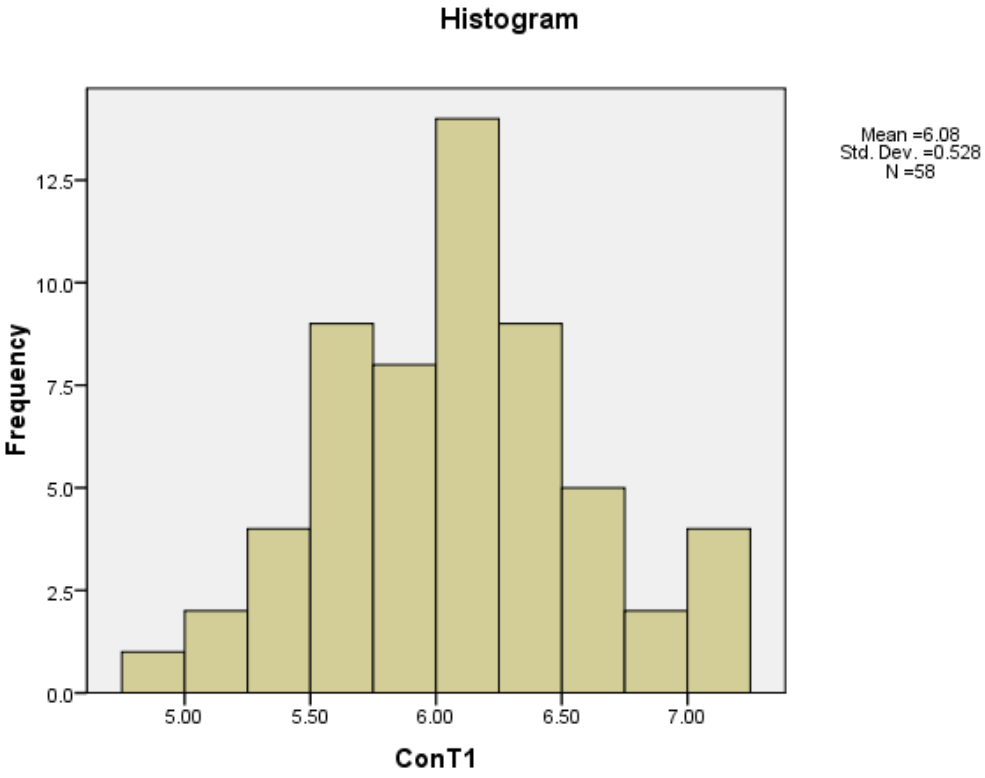
			Statistic	Std. Error
ConT1	Mean		6.0793	.06929
	95% Confidence Interval for Mean	Lower Bound	5.9406	
		Upper Bound	6.2181	
	5% Trimmed Mean		6.0787	
	Median		6.1000	
	Variance		.278	
	Std. Deviation		.52772	
	Minimum		4.84	
	Maximum		7.20	
	Range		2.36	
	Interquartile Range		.67	
	Skewness		.091	.314
	Kurtosis		-.020	.618

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ConT1	.076	58	.200*	.986	58	.734

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.



Test normality of the control group T2

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
ConT2	58	100.0%	0	.0%	58	100.0%

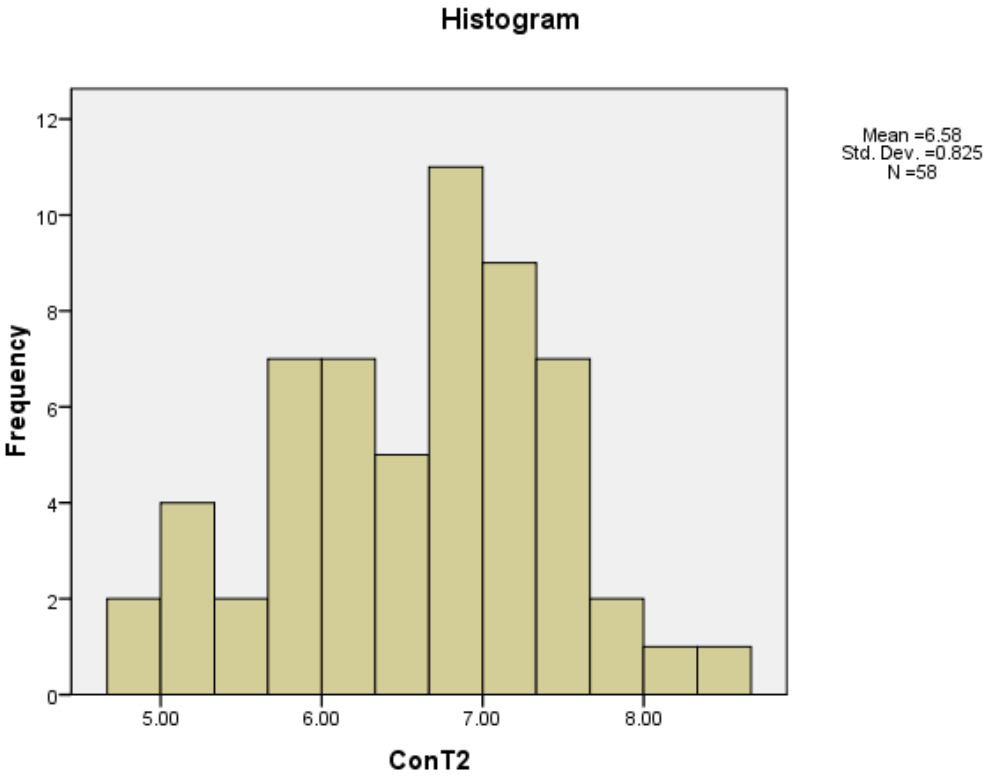
Descriptives

			Statistic	Std. Error
ConT2	Mean		6.5834	.10837
	95% Confidence Interval for Mean	Lower Bound	6.3665	
		Upper Bound	6.8004	
	5% Trimmed Mean		6.5924	
	Median		6.7600	
	Variance		.681	
	Std. Deviation		.82529	
	Minimum		4.76	
	Maximum		8.52	
	Range		3.76	
	Interquartile Range		1.16	
	Skewness		-.267	.314
	Kurtosis		-.369	.618

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ConT2	.105	58	.176	.977	58	.344

a. Lilliefors Significance Correction



Test normality of the Experimental group T1

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
MeanQOLExT1	57	100.0%	0	.0%	57	100.0%

Descriptives

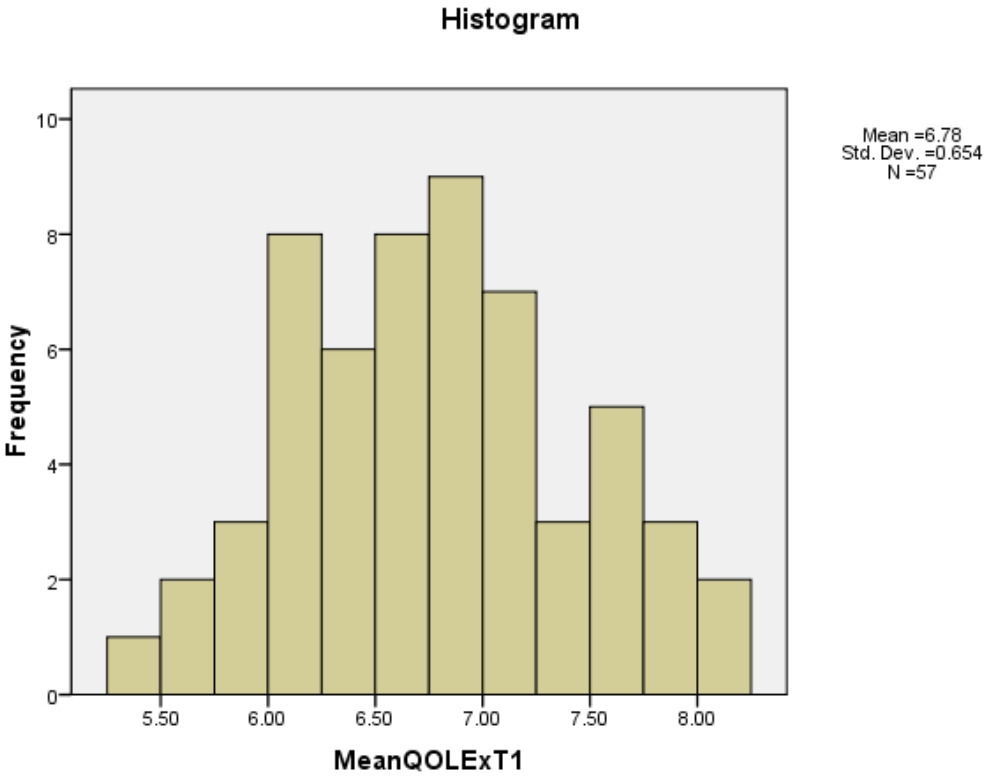
			Statistic	Std. Error
MeanQOLExT1	Mean		6.7782	.08657
	95% Confidence Interval for Mean	Lower Bound	6.6048	
		Upper Bound	6.9517	
	5% Trimmed Mean		6.7819	
	Median		6.7600	
	Variance		.427	
	Std. Deviation		.65356	
	Minimum		5.36	
	Maximum		8.00	
	Range		2.64	
	Interquartile Range		.94	
	Skewness		-.004	.316
	Kurtosis		-.666	.623

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
MeanQOLExT1	.066	57	.200*	.981	57	.523

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.



Test normality of the experiment group T2

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
MeanQOLExT2	57	100.0%	0	.0%	57	100.0%

Descriptives

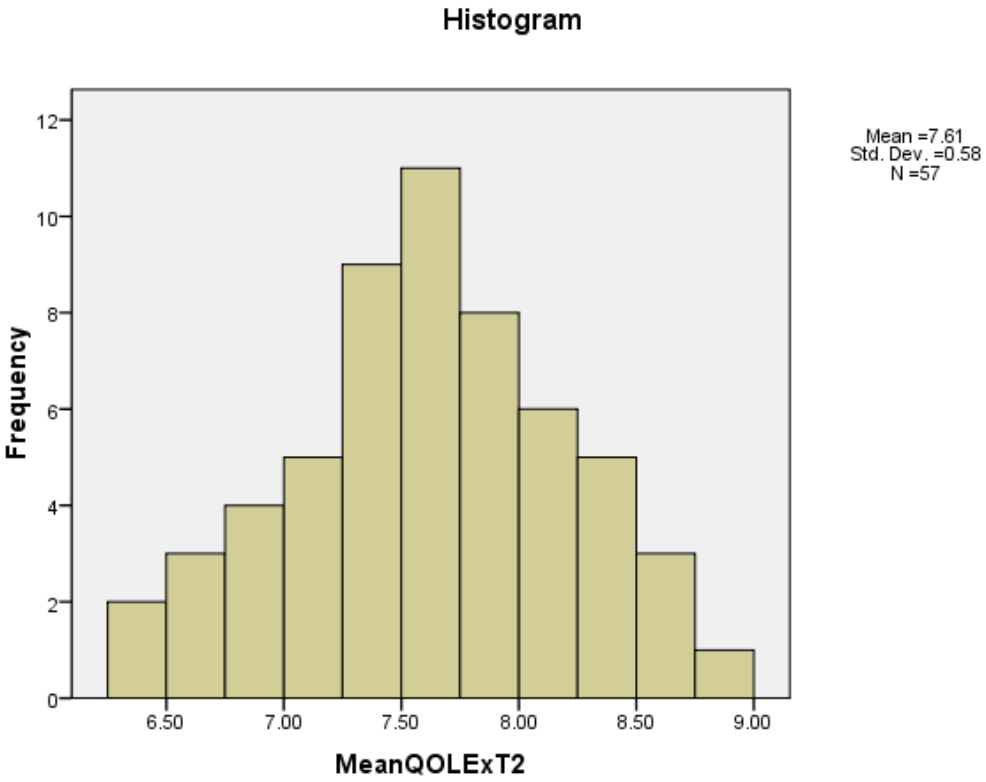
			Statistic	Std. Error
MeanQOLExT2	Mean		7.6084	.07678
	95% Confidence Interval for Mean	Lower Bound	7.4546	
		Upper Bound	7.7622	
	5% Trimmed Mean		7.6070	
	Median		7.7200	
	Variance		.336	
	Std. Deviation		.57969	
	Minimum		6.48	
	Maximum		8.92	
	Range		2.44	
	Interquartile Range		.78	
	Skewness		-.049	.316
	Kurtosis		-.445	.623

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
MeanQOLExT2	.093	57	.200*	.983	57	.623

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.



NDEPENDENT T-TEST FOR ONE-WEEK POST MASTECTOMY

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
MeanscoreQOLT1	Experiment	57	6.7782	.65356	.08657
	Control	58	6.0793	.52772	.06929

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
MeanscoreQOLT1	Equal variances assumed	2.762	.099	6.315	113	.000	.69894	.11068	.47966	.91821
	Equal variances not assumed			6.303	107.424	.000	.69894	.11088	.47913	.91874

INDEPENDENT T-TEST FOR SUBGROUP QOL ONE-WEEK POST MASTECTOMY

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Psychological wellbeingT1	Experiment	57	6.7456	.92588	.12264
	Control	58	5.9052	1.09318	.14354
Physical wellbeingT1	Experiment	57	6.2316	.88945	.11781
	Control	58	5.1276	.86548	.11364
Body ImageT1	Experiment	57	6.5570	.92463	.12247
	Control	58	6.1810	.74897	.09834
Treatment ResponseT1	Experiment	57	6.9123	.80349	.10642
	Control	58	6.7808	.68549	.09001
Social ConcernsT1	Experiment	57	7.7368	1.36093	.18026
	Control	58	6.2414	1.39170	.18274

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Psychological wellbeingT1	Equal variances assumed	.363	.548	4.445	113	.000	.84044	.18907	.46586	1.21502
	Equal variances not assumed			4.452	110.601	.000	.84044	.18880	.46632	1.21457
Physical wellbeingT1	Equal variances assumed	.491	.485	6.746	113	.000	1.10399	.16365	.77977	1.42821
	Equal variances not assumed			6.744	112.773	.000	1.10399	.16369	.77969	1.42830
Body ImageT1	Equal variances assumed	4.271	.041	2.398	113	.018	.37598	.15678	.06537	.68660
	Equal variances not assumed			2.394	107.564	.018	.37598	.15707	.06463	.68734
Treatment ResponseT1	Equal variances assumed	1.665	.200	.945	113	.347	.13149	.13919	-.14427	.40726
	Equal variances not assumed			.943	109.649	.348	.13149	.13938	-.14474	.40773
Social ConcernsT1	Equal variances assumed	.135	.714	5.825	113	.000	1.49546	.25673	.98682	2.00410

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Psychological wellbeingT1	Equal variances assumed	.363	.548	4.445	113	.000	.84044	.18907	.46586	1.21502
	Equal variances not assumed			4.452	110.601	.000	.84044	.18880	.46632	1.21457
Physical wellbeingT1	Equal variances assumed	.491	.485	6.746	113	.000	1.10399	.16365	.77977	1.42821
	Equal variances not assumed			6.744	112.773	.000	1.10399	.16369	.77969	1.42830
Body ImageT1	Equal variances assumed	4.271	.041	2.398	113	.018	.37598	.15678	.06537	.68660
	Equal variances not assumed			2.394	107.564	.018	.37598	.15707	.06463	.68734
Treatment ResponseT1	Equal variances assumed	1.665	.200	.945	113	.347	.13149	.13919	-.14427	.40726
	Equal variances not assumed			.943	109.649	.348	.13149	.13938	-.14474	.40773
Social ConcernsT1	Equal variances assumed	.135	.714	5.825	113	.000	1.49546	.25673	.98682	2.00410
	Equal variances not assumed			5.826	112.997	.000	1.49546	.25668	.98692	2.00400

INDEPENDENT T-TEST FOR QOL POST MASTECTOMY 3-WEEK

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
MeanscoreQOLT2	Experiment	57	7.6084	.57969	.07678
	Control	58	6.5834	.82529	.10837

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
MeanscoreQOLT2	Equal variances assumed	7.529	.007	7.695	113	.000	1.02497	.13321	.76107	1.28888
	Equal variances not assumed			7.718	102.343	.000	1.02497	.13281	.76156	1.28839

INDEPENDENT T-TEST FOR SUBGROUP OF QOL POST MASTECTOMY 3-WEEK

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Psychological wellbeingT2	Experiment	57	7.6111	.75418	.09989
	Control	58	6.3161	1.07637	.14133
Physical wellbeingT2	Experiment	57	7.4105	.85308	.11299
	Control	58	5.8414	1.04008	.13657
Body ImageT2	Experiment	57	7.2588	.92094	.12198
	Control	58	6.4397	1.07942	.14174
Treatment ResponseT2	Experiment	57	7.7318	.69204	.09166
	Control	58	7.5025	1.16527	.15301
Social ConcernsT2	Experiment	57	8.1111	1.20405	.15948
	Control	58	6.5805	1.40946	.18507

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Psychological wellbeingT2	Equal variances assumed	6.177	.014	7.460	113	.000	1.29502	.17359	.95110	1.63893
	Equal variances not assumed			7.483	102.211	.000	1.29502	.17307	.95174	1.63830
Physical wellbeingT2	Equal variances assumed	1.102	.296	8.837	113	.000	1.56915	.17756	1.21737	1.92092
	Equal variances not assumed			8.853	109.514	.000	1.56915	.17725	1.21786	1.92044
Body ImageT2	Equal variances assumed	.226	.636	4.374	113	.000	.81912	.18726	.44813	1.19011
	Equal variances not assumed			4.380	110.824	.000	.81912	.18700	.44856	1.18967
Treatment ResponseT2	Equal variances assumed	29.597	.000	1.281	113	.203	.22937	.17911	-.12549	.58422
	Equal variances not assumed			1.286	93.055	.202	.22937	.17836	-.12482	.58356
Social ConcernsT2	Equal variances assumed	.941	.334	6.257	113	.000	1.53065	.24464	1.04597	2.01533

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Psychological wellbeingT2	Equal variances assumed	6.177	.014	7.460	113	.000	1.29502	.17359	.95110	1.63893
	Equal variances not assumed			7.483	102.211	.000	1.29502	.17307	.95174	1.63830
Physical wellbeingT2	Equal variances assumed	1.102	.296	8.837	113	.000	1.56915	.17756	1.21737	1.92092
	Equal variances not assumed			8.853	109.514	.000	1.56915	.17725	1.21786	1.92044
Body ImageT2	Equal variances assumed	.226	.636	4.374	113	.000	.81912	.18726	.44813	1.19011
	Equal variances not assumed			4.380	110.824	.000	.81912	.18700	.44856	1.18967
Treatment ResponseT2	Equal variances assumed	29.597	.000	1.281	113	.203	.22937	.17911	-.12549	.58422
	Equal variances not assumed			1.286	93.055	.202	.22937	.17836	-.12482	.58356
Social ConcernsT2	Equal variances assumed	.941	.334	6.257	113	.000	1.53065	.24464	1.04597	2.01533
	Equal variances not assumed			6.265	110.861	.000	1.53065	.24431	1.04654	2.01477

PAIR SAMPLE T-TEST FOR QOL OF CONTROL GROUP THROUGH

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	MeanscoreQOLT2	6.5834	58	.82529	.10837
	MeanscoreQOLT1	6.0793	58	.52772	.06929
Pair 2	Psychological wellbeingT2	6.3161	58	1.07637	.14133
	Psychological wellbeingT1	5.9052	58	1.09318	.14354
Pair 3	Physical wellbeingT2	5.8414	58	1.04008	.13657
	Physical wellbeingT1	5.1276	58	.86548	.11364
Pair 4	Body ImageT2	6.4397	58	1.07942	.14174
	Body ImageT1	6.1810	58	.74897	.09834
Pair 5	Treatment ResponseT2	7.5025	58	1.16527	.15301
	Treatment ResponseT1	6.7808	58	.68549	.09001
Pair 6	Social ConcernsT2	6.5805	58	1.40946	.18507
	Social ConcernsT1	6.2414	58	1.39170	.18274

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	MeanscoreQOLT2 - MeanscoreQOLT1	.50414	.97347	.12782	.24818	.76010	3.944	57	.000
Pair 2	Psychological wellbeingT2 - Psychological wellbeingT1	.41092	1.55979	.20481	.00079	.82105	2.006	57	.050
Pair 3	Physical wellbeingT2 - Physical wellbeingT1	.71379	1.29513	.17006	.37326	1.05433	4.197	57	.000
Pair 4	Body ImageT2 - Body ImageT1	.25862	1.27730	.16772	-.07723	.59447	1.542	57	.129
Pair 5	Treatment ResponseT2 - Treatment ResponseT1	.72167	1.42391	.18697	.34728	1.09607	3.860	57	.000
Pair 6	Social ConcernsT2 - Social ConcernsT1	.33908	1.91077	.25090	-.16333	.84149	1.351	57	.182

PAIR SAMPLE T-TEST FOR QOL OF EXPERIMENTAL GROUP

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	MeanscoreQOLT2	7.6084	57	.57969	.07678
	MeanscoreQOLT1	6.7782	57	.65356	.08657
Pair 2	Psychological wellbeingT2	7.6111	57	.75418	.09989
	Psychological wellbeingT1	6.7456	57	.92588	.12264
Pair 3	Physical wellbeingT2	7.4105	57	.85308	.11299
	Physical wellbeingT1	6.2316	57	.88945	.11781
Pair 4	Body ImageT2	7.2588	57	.92094	.12198
	Body ImageT1	6.5570	57	.92463	.12247
Pair 5	Treatment ResponseT2	7.7318	57	.69204	.09166
	Treatment ResponseT1	6.9123	57	.80349	.10642
Pair 6	Social ConcernsT2	8.1111	57	1.20405	.15948
	Social ConcernsT1	7.7368	57	1.36093	.18026

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	MeanscoreQOLT2 - MeanscoreQOLT1	.83018	.85344	.11304	.60373	1.05662	7.344	56	.000
Pair 2	Psychological wellbeingT2 - Psychological wellbeingT1	.86550	1.15145	.15251	.55998	1.17102	5.675	56	.000
Pair 3	Physical wellbeingT2 - Physical wellbeingT1	1.17895	1.21754	.16127	.85589	1.50200	7.311	56	.000
Pair 4	Body ImageT2 - Body ImageT1	.70175	1.32325	.17527	.35065	1.05286	4.004	56	.000
Pair 5	Treatment ResponseT2 - Treatment ResponseT1	.81955	1.07839	.14284	.53341	1.10568	5.738	56	.000
Pair 6	Social ConcernsT2 - Social ConcernsT1	.37427	2.08744	.27649	-.17960	.92814	1.354	56	.181

Details of quality of life in post mastectomy patient (n=115)

Indicators	Quality of life post mastectomy							
	Control group				Experiential group			
	T1		T2		T1		T2	
	Mean	(SD)	Mean	(SD)	Mean	(SD)	Mean	(SD)
Strength	**5.05**	1.2	**5.41**	1.42	**6.07**	.97	**7.26**	1.06
Tired	**6.21**	1.21	**6.97**	1.42	**6.88**	1.13	**7.65**	1.48
Sleep	**6.03**	1.52	**6.05**	1.77	**6.30**	1.28	**7.72**	1.50
Weight	**6.93**	1.57	**7.93**	1.72	**7.75**	1.69	**7.04**	1.61
Appetite	**5.50**	2.04	**5.88**	2.09	**6.96**	1.56	**7.82**	1.19
Food amount	**6.09**	2.00	**6.47**	1.87	**6.79**	1.27	**8.14**	1.17
Daily work	**3.38**	2.15	**4.29**	1.73	**5.12**	1.22	**6.60**	.97
Current health	**5.17**	1.54	**6.17**	1.47	**6.26**	1.44	**7.40**	1.17
Fun	**4.26**	2.44	**5.34**	1.88	**5.60**	2.00	**6.67**	1.44
Useful	**5.83**	1.71	**6.36**	1.68	**6.82**	1.94	**8.14**	1.42
Happiness	**6.67**	1.82	**6.93**	1.50	**7.53**	1.94	**8.26**	1.34
Worry of future	**7.12**	1.60	**7.00**	1.46	**7.28**	1.55	**7.46**	1.37
Life satisfaction	**5.84**	1.75	**6.69**	1.58	**6.81**	1.85	**7.74**	1.18
Pain	**6.16**	1.07	**7.43**	1.70	**6.39**	1.25	**6.95**	1.34
Frequent of pain	**6.88**	1.39	**7.64**	1.83	**6.53**	1.37	**7.56**	1.26
Arm swollen	**8.12**	1.62	**8.91**	1.62	**7.91**	1.90	**9.30**	1.37
Raising hand	**6.17**	1.12	**6.97**	1.46	**6.14**	.93	**7.61**	1.39
Breast sensitive	**7.12**	1.57	**7.17**	1.63	**6.88**	1.54	**7.53**	1.73
Adjust easy	**5.16**	2.00	**4.98**	1.94	**6.77**	1.77	**7.47**	1.71
Scare of scar	**6.47**	1.24	**7.22**	1.54	**6.75**	1.37	**7.53**	1.45
Perceive femininity	**6.50**	1.36	**6.69**	1.54	**6.04**	1.14	**6.89**	1.46
Look at body	**6.60**	1.25	**6.86**	1.51	**6.67**	1.46	**7.14**	1.32
Meeting others	**5.43**	2.11	**5.64**	1.84	**6.96**	1.84	**7.63**	1.65
Reject by other	**7.66**	1.94	**8.40**	1.86	**8.72**	1.66	**8.95**	1.36
Privacy	**5.64**	2.01	**5.71**	2.17	**7.53**	1.96	**7.75**	1.53

VITA

Ha This Nhu Xuan was born in Bao Loc town, Lam Dong Province, Vietnam. She received the Bachelor of Nursing at University of Medicine and Pharmacy in Ho Chi Minh city in 2006. After that, she became a clinical nurse of Columbia Asia Hospital and then became nursing lecturer in the University of Medicine and Pharmacy in Ho Chi Minh since 2007. She got the Master degree of nursing in 2010 at Saxion University of Applied Science. She was a nurse practitioner in Surgical nursing (Adult nursing) and was a clinical nursing instructor at Cho Ray Hospital, faculty of Surgical Urology, Surgical Orthopedic and her experiences was specific in post-operation care. In nursing profession she contributed some academic work such as publising the hand book of caring for cardiology patients at home which was published by Medical publlisher, Ministry of health, 2010. She also enhanced the quality of nursing care and nursing education with some project with the title " Developing bladder washout protocol for neobladder ileal reconstruction patient in Viet Nam", master thesis in 2010; "Developing suction sputum through supporting ventilation machine protocol for infants" in 2013 and " Effectiveness of the coordinating between nursing lecturers and preceptors project in clinical practice for bachelor of nursing" in 2013 at University of Medicine and Pharmacy. At May 2013, she got the support from the budget of ASEAN countries scholarship's and participated in the PhD nursing program in Faculty of Nursing, Chulalongkorn University. During her study program, she conducted a dissertation with the title "The effect of uncertainty management program on quality of life among Vietnamese women with post mastectomy". This study received the research funding from The 90th years Anniversary of Chulalongkorn University scholarships.