

CHAPTER 2

LITERATURE REVIEW

In this chapter, concepts and a number of related studies have been reviewed for developing background, conceptual framework, methodology, and instruments. Literature reviews were grouped into five highlighted aspects: concepts of caring, studies on caring, pre-operative anxiety, caring practices in reducing patients' pre-operative anxiety, and perceptions of caring practices in reducing pre-operative anxiety and related factors.

Concepts of Caring

Caring is derived from the word 'care'. Caring is a universal phenomenon, which people think, feel, and behave in relation to one another (Heidegger, 1962 as cited in Dyson, 1996). Caring refers to a continuity of developmental process characterized by being with the others in his or her environment (Mayeroff, 1971 as cited in Wolf, 1986). Leininger (1981) defined that caring is a feeling of dedication to another person to the extent that it motivates and energizes action to influence life constructively and positively by increasing intimacy and mutual self-actualization. Watson (1979; 1988; 1999) stated that caring is the moral ideal of nursing, in which nurses become responsive to another person as a unique individual, perceive the patients' feelings, and act for protection, enhancement, and preservation of patients' dignity. Human caring involves a will and a commitment to care, caring actions, and consequences that communicate caring to patients. Wolf (1986) stated that caring is

an interactive and inter-subjective process that occurs during movement of shared vulnerability between nurse and patient. Another scholar, Swanson (1991), also defined caring as a nurturing way of relating to a valued other toward whom one feels a personal sense of commitment and responsibility.

Caring has been described as the very base of nursing and the focus for nursing practice. Various concepts of caring have been developed since 1970s. Mayeroff (1971 as cited in Wolf, 1986) viewed caring as helping people grow. He has identified into six caring processes: knowing, alternating rhythms, patience, honesty, trust, humility, hope, and courage. Knowing refers to understanding human-need how to respond to people's needs and how to care for them. Alternating refers to how to use past experiences to care for the others. Patience refers to the ability to find time, listen to others, be present, and tolerant. Honesty refers to respecting someone and his or her pleasant facts, and determines whether caring helps or hinders the growth of other. Trust refers to trusting that the person will grow in time and in her or his own way. Humility refers to continuously learning the uniqueness of the others and caring. Hope refers to caring and helping person to grow properly. Courage refers to go into the unknown of the other without fear. However, there was lack of caring tool based on Mayeroff's caring concept.

Larson (1987) explored nurses' caring behaviors in cancer patients and nurses. The concept of caring consisted of six subscales: accessible, explains and facilitates, comforts, trusting relationship, anticipates, monitors and follows through. Larson (1984) developed the Caring Assessment Report Evaluation Q sort (CARE-Q) for assessing caring needs and perception of cancer patients. It was the first quantitative caring tool cited in caring. The CARE-Q consisted of 50 items.

Responding each item of the CARE-Q, participants put it in seven pockets in a row from left to right. Each pocket is labeled with numbers: 1 (most important), 4 (fairly important), 10 (somewhat important), 20 (neither important or unimportant), 10 (somewhat unimportant), 4 (unimportant), and 1 (not important). The CARE-Q was developed for identifying nurses' caring behaviors that are perceived as important in making patients feel cared for. Larson (1984; 1986) identified some limitations of the CARE-Q in selecting one item over another item. Kyle (1995) also commented that participants wished to select item of the CARE-Q, but they felt unsure to select caring actions. In addition, some participants did not sort the cards according to directions (Beck, 1999).

Swanson (1986; 1991) has also developed caring concepts from women who were miscarried at risk mothers in neonatal intensive care unit. This caring process encompasses five caring dimensions: knowing, being-with, doing-for, enabling, and maintaining-belief. Knowing dimension is striving to understand an event as it has meaning in the life of the other. Health professional focuses the one cared for and avoids a prior assumption about the meaning of an event. Being-with dimension refers to being emotionally present to the other. Health professionals are involved in conveying availability, sharing of joyful or painful feelings. Doing-for dimension refers to doing for the other what he or she should do for the self. This dimension includes comforting, anticipating and being protective of the other's needs. Enabling dimension refers to facilitating the one through life transition and unfamiliar event. This involves providing information and offering support to the other. The final caring process, maintaining belief dimension, refers to sustaining person's faith to get through an event, transition, and facing a future. Swanson (1986) developed Caring

Professional Scale (CPS) to measure five dimensions of caring processes. The CPS consists of 14 items, which were constructed on a 5-point Likert scale ranked from 1 (yes, definitely) to 5 (no, not at all). The CPS was developed as a strategy to monitor caring as intervention or process variable.

Watson (1979; 1988; 1999) identified ten carative factors for caring behaviors. Carative factor is a term in caring concept instead of the term curative as commonly used in medicine field. Although numerous scholars have analyzed caring as a concept, Watson more clearly shows how the components of the caring process operate. Watson's basic assumptions state that effective caring promotes health and individual or family growth, and the caring practice is central to nursing. Nurses used the ten carative factors as a framework for the caring process.

1. Humanistic-altruistic system of values: the capacity to view humanity with reverence and commitment. This carative factor can be defined as satisfaction of receiving through giving in the context of nursing practice.

2. Faith-hope: instillation of belief in one self and others to facilitate and promote holistic care. It describes the role of nurse in developing effective nurse-interrelationships and promoting health by helping patients adopt health-seeking behaviors.

3. Sensitivity to self and to others: the use of sensitivity and feelings to promote self-acceptance, self-care, and self-actualization actualizes as nurses' offering genuine, authentic, and sensitive care to others.

4. Development of a helpful-trusting relationship: a congruent trusting relationship between nurse-patient, empathy, non-possessive warmth, and effective communication.

5. Expression of positive and negative feelings: sharing feelings both negative and positive. Nurses need to recognize intellectual and emotional aspects of patient behaviors, self-awareness, and self-control.

6. Creative problem-solving method for decision-making: the use of nursing process to produce scientific problem-solving approaches of nursing care. Nurses use nursing process to take care of patient.

7. Interpersonal teaching-learning: the process of teaching-learning to enable patients to understand health concerns, perform self-care, and achieve well-being.

8. Supportive, protective, and corrective environment: mental physical, social, and spiritual environment; the manipulation of internal and external environment to promote harmony and health. Nurses need to recognize influences of internal and external environments regarding the patient illness.

9. Human-need assistance: nursing intervention to satisfy patients' needs. Nurses need to recognize the biophysical, psychological, psychosocial, and interpersonal needs of their patient.

10. Existential-phenomenological forces: understanding the immediate uniqueness of patients and their problems. Nurses need to understand patients' uniqueness, problems, and related solutions.

According Dr. Watson, these factors can be used to apply caring to nursing practices regardless of specific setting. The first three carative factors: humanistic-altruistic system, faith-hope, sensitivity to others, serve as the philosophical foundation for the science of caring. Cronin and Harrison (1988a) grouped the three carative factors into a subscale, humanism-faith-hope-sensitivity. The sixth carative

factors, creative problem-solving method for decision-making, was assumed inherent to all factors and developed for nursing process to patients. They constructed seven subscales: humanism-faith-hope-sensitivity, trust-relationship, expression of positive-negative feelings, interpersonal teaching-learning, supportive-protective-curative environment, existential-phenomenological forces, and human-need assistance. They developed the first instrument in myocardial infarction patients, Caring Behaviors Assessment (CBA) covering seven subscales, which are congruent with Watson's ten curative factors. The CBA consisted of 63 items: 16 items of humanism-faith-hope-sensitivity, 11 items of trust-relationship, 4 items of expression of positive-negative feelings, 8 items of interpersonal teaching-learning, 12 items of supportive-protective-curative environment, 9 items of human-need assistance, and three items of existential-phenomenological forces. The CBA was constructed on a 5-point Likert scale ranked from 1 (little importance) to 5 (much importance). The CBA was developed to assess nursing behaviors to the patients' sense of feelings cared for and about.

Wolf (1986; 1994) derived caring concept from caring literature in general and Watson's theory in particular. Wolf's concept encompasses five correlated subscales: respectful deference to the other, assurance of human presence, positive connectedness, professional knowledge and skill, and attentiveness to others' experience. Wolf (1986) developed Caring Behaviors Inventory (CBI) to measure five subscales. The CBI was developed for understanding caring situations, increasing nurses' awareness, and patients' caring perception, which consisted of 42 items. The CBI was revised twice to increase the variability of responses. The CBI version 1 was ranked in the scale from a 4-point scale with 1 (strongly disagree) to 4 (strongly

agree) and the CBI version 2 was revised into a 6-point Likert with 1 (never) to 6 (always).

In summary, there are various concepts of caring and various tools for caring measurement. Particularly, Watson's concept focuses on transpersonal caring relationship as moral ideal to achieve the high quality of caring practices. This caring concept was clearly shown how the components of the caring process operate to nursing practices regardless of specific setting. The CBA with its seven subscales was used for developing questionnaires of caring practices in reducing pre-operative anxiety. Caring concepts developed by Watson (1979; 1988; 1999) was selected for developing the conceptual framework of this study.

Studies on Caring

Review of caring has been found in various studies. The studies have explored caring practices in health professionals and cancer, medical, surgical, emergency, and obstetric gynecological patients. Larson (1984; 1986; 1987) had studied perception of caring with the CARE-Q. Larson (1984) initially explored important caring behaviors as perceived by cancer patients (N=57). The findings of the five most important caring behaviors covered knowing how to give injections and to manage the equipment, knowing when to call the doctor, give a quick response to the patient's call, give good physical care, and give treatments and medications on time. Larson (1986) also explored cancer nurses' perceptions of caring (N=57) in two hospitals. The findings of the ten most caring behaviors included (1) listening to the patient, (2) touching when comforting is needed, (3) allowing expression of feelings, (4) getting to know the patient as an individual, (5) talking to the patient, (6) realizing

that the patient knows himself the best, (7) is perceptive of the patient's needs, (8) giving a quick response to the patient's call, (9) putting the patient first, and (10) giving good physical care to patient. Nurses' perception of the ten least important nurse caring behaviors included (1) is well organized, (2) makes sure that appointment are realistic to patient's condition, (3) volunteers to do little things, (4) asks the patient preferred name, (5) tells of support systems available, (6) offers reasonable alternative, (7) is cheerful, (8) verifies best time to talk about changes in condition or care, (9) suggest questions for the patient to ask doctor, and (10) is professional in appearance. Larson (1987) compared between cancer patients' and nurses' perception of important nurse caring behaviors. She found that three of the CARE-Q subscales were significantly different ($p < .0001$), whereas the other three of the six subscales were not significantly different ($p > .05$). For 19 of the CARE-Q items, there was a significant difference between the item mean scores of nurses and patients. Most important nurses' caring behaviors agreed by cancer patients and nurses included gives quick response to patient' call, listens to patient, talks to patient, puts patient first no matter what else happens, and gives good physical care to patient.

von Essen and Sjoden (1991a) also explored nurses' caring behaviors as perceived by nurses ($N=105$) and patients ($N=81$) in Sweden. The findings revealed significant difference between the two groups in the rating of 29 items of instruments' 50 specific behaviors ($p < .05$) and on five of six subscales of the CARE-Q. Nurses' perception of important nurse caring behaviors differed from patients' perception. von Essen and Sjoden (1991b) also replicated their study of patients' and nurses' perception of caring by using the CARE-Q tool in 8 hospitals in Sweden.

Another scholar, Rosenthal (1992), compared the perception of important caring behaviors between coronary patients (N=30) and nurses (N=30) with the CARE-Q tool at the three hospitals. The top ten most important and the ten least important caring behaviors rated by nurses and patients were different. From three latter studies, the findings of the ten nurse caring behaviors as perceived by nurses and patients were little different order in each item, as shown in Table 3-1.

Table 3-1 The ten caring behaviors according to nurses and patients in the three studies

Larson, 1987		von Essen & Sjoden, 1991a		Rosenthal, 1992	
Nurses	Cancer patients	Nurses	Surgical patients	Nurse	Coronary patients
- allows expression of feelings	- knows how to give injection	- listen to patient	- is honest with the patient	- listen to the patient	- knows how to give injection
- gets to know the patient as an individual	- knows when to call physician	- talks to the patient	- knows when to call doctor	- knows when to call the doctor	- gives the patient's treatment and medication on time
- realizes the patient knows himself best	- gives good physical care to the patient	- is calm	- helps the patient clarify his/her thinking in regard to his/her disease and treatment	- allows the patient to fully express his or her feelings	- knows when to call physician
- puts patient first no matter what else happens	- give patient's treatments and medication on time	- knows when to call the doctor	- tells patient in understandable language what is important to know about his/her disease and treatment	- gives good physical care to the patient	- gives a quick response to the patients' call
- listen to the patient	- checks on the patient frequently	- tells patient in understandable language what is important to know about his/her disease and treatment	- tells patient in understandable language	- touches the patient	- tells patient in understandable language
- touches when comforting in needed	- is well organized	- is cheerful	- knows how to give injection and how to manage equipment	- gives a quick response to the patients' call	- gives good physical care to the patient
- talks to the patient	- talks to the patient	- touches the patient	- is cheerful	- encourage the patient to ask any questions he or she might have	- encourage the patient to call
- is perceptive of the patient's needs	- listens to the patient	- knows how to give injection and how to manage the equipment	- listens to patient	- realizes that the patient knows him or herself the best	- listens to the patient
- gives a quick response to the patient's call	- gives quick response to patient' call	- sits down with the patient	- provides the patient with encouragement	- encourage the patient to call	- is honest with the patient about medical condition
- gives good physical care to the patient	- puts patient first no matter what else happens	- is perceptive of the patient's needs and plans and acts accordingly	- is calm	- is calm	- is well organized
			- gives patient's treatment and medication on time		

In addition to caring study, Leiononen, Leino-Kilpi, Stahberg, and Lertola (2003) compared patients' perception (N=874) and registered nurses' perception of

perioperative care quality in five operating departments in Finland (N=143). They developed the questionnaire of Good Perioperative Nursing Care Scale. The questionnaires consisted of 12 main subscales: (1) physical activities, (2) educational activities, 3) supportive initiative, (4) staff characteristics, (5) respect, (6) caring, (7) advocacy, (8) encouragement, (9) physical environment, (10) preconditions, (11) social environment, and (12) progress of nursing process to explore and to compare perception of perioperative care quality for both groups. The findings indicate that patients tended to perceive significantly higher care quality than nurses did ($p<.001$), and the biggest discrepancy of subscale between the two groups was found in supportive initiative.

Wolf (1986) studied the concept of caring and nurses' perception of caring behaviors using the Caring Behavior Inventory (CBI) which consisted of 75 items in registered nurses in Philadelphia (N=97). The ten highest ranked caring behaviors included attentive listening, comforting, honesty, patience, responsibility, and providing information, so that the patient can make informed decisions, touch, sensitivity, respect, and calling the patient by name. Wolf (1994) described the dimensions of the CBI in 541 subjects: nurses (N=278) and patients (263). The revised CBI consisted 43 items. The findings of study included five dimensions: respectful deference to other, assurance of human presence, positive connectedness, professional knowledge and skill, and attentive to other's experience.

Swanson-Kauffman (1986) derived caring concept from a limited review of the loss and caring literature. She explored caring in the instance of unexpected early pregnancy loss (N=20). The conceptualization of caring included five dimensions: knowing, being with, doing for, enabling, and maintaining belief. Swanson (1991) had

developed caring theory continuously in two studies. In 1988, she conducted phenomenological study in young mothers in the Mental Health Intervention Group to refine the five dimensions of caring (N=8). In 1990, she also continued her study in care providers to confirm and refine the five caring processes (N=19).

Cronin and Harrison (1988a) initially studied the importance of nurses' caring behaviors, as perceived by patients after myocardial infarction (N=22). The first Caring Behaviors Assessment, which consisted of seven subscales, was congruent with Watson's ten carative factors. Caring Behaviors Assessment consists of 63 items: 16 items of humanism-faith-hope-sensitivity, 11 items of trust-relationship, 4 items of expression of positive-negative feelings, 8 items of interpersonal teaching-learning, 12 items of supportive-protective-curative environment, 9 items of human-need assistance, and three items of existential-phenomenological forces. Cronin and Harrison (1988b) found that reliability coefficients of each subscale ranged from .66 to .90 and the findings of the study spanned to seven subscales: human-need assistance (.89), interpersonal teaching-learning (.90), human-faith-hope-sensitivity (.84), existential phenomenological forces (.66), supportive-protective-corrective environment (.79), helping-trust relationship (.76), and expression of feelings (.67).

Parsons, Kee, and Gray (1993) studied surgical patients' perception of perioperative caring practices by using tool of Caring Behavior Assessment (N=56). The findings covered the most important caring behaviors referring seven subscales in perioperative patients. The rankings of the seven subscales were human-need assistance, interpersonal teaching-learning, human-faith-hope-sensitivity, supportive-

protective-corrective environment, helping-trust, existential-phenomenological forces, and expression of feelings.

Burchiel (1995) argued that in perioperative phase, patients needed technical procedures and faced a foreign environment; nurses still provided caring by keeping the patients covered, respecting patients' requests, allowing patients to pray, touching and maintaining appropriate conversation during anesthesia induction as caring behaviors to protect and preserve the patients' human dignity. She concluded that caring behaviors in the perioperative period included touching, listening, holding, and advocacy of patients. McNamara (1995) explored perioperative nurses' perception of caring practices in qualitative study (N=6). The caring practices were focused on establishing trust-relationship between nurses and patients, providing support, protecting, promoting safety, and physical presence with patients in pre-operative phase. Caring practices identified by patients included communication using verbal messages, gestures, posture, touch, tone of voice, facial expressions, and listening to patients. In post-operative phase, caring practices were reported as attending patients' safety, physical needs, dissemination of information, and sensitivity of patients' feelings. McNamara's study did not identify caring practices specifically to reducing pre-operative anxiety.

Manogin, Bechtel, and Rami (2000) studied caring behaviors, as perceived by women during childbirth (N=31). The study found that the rankings of seven subscales were human-need assistance, interpersonal teaching-learning, human-faith-hope-sensitivity, supportive-protective-corrective environment, helping-trust, existential-phenomenological forces, and expression of feelings. Baldursdottir and Jonsdottir (2002) also studied the importance of nurse caring behaviors, as perceived

by patients receiving care at an emergency department (N=300). They used Caring Behaviors Assessment consisting of 61 items, which was modified from Cronin and Harrison (1988a). Subjects were requested to rate their perception of each item on a 5-point Likert scale. The findings showed that human-need assistance was the most important subscale and expression of positive/negative feelings was the least important. This supported the findings of previous studies in various settings.

Regarding the caring quality, studies on caring behaviors aimed to achieve quality of caring practices by reflective practices. Systematic evaluation as reflective practices helps nurses to expand and to develop their knowledge and skills in order to improve quality of care. Based on traditional framework of quality assurance, quality measurement follows up continuous quality improvement, which the major process includes determining the level of which standards are met and introducing changes for continuous improvement (Meisenheimer, 1992). Quality assurance has been developed particularly in nursing quality assurance (nursing QA). It is necessary to ensure and to maintain optimal caring practices for patients and to monitor the quality of nursing practice. Nursing QA is also responsible to develop and disseminate standard of care and clinical protocols of caring practices (Schroeder, 1991). Moreover, previous caring studies assessed nurses' and patients' perception of the important caring behaviors in clinical area enable to enhance the quality of care by maintaining the quality of care and developing standard of care, which meets patients' expectation.

In summary, the highlighted studies have used caring concepts developed by Watson (1979), Larson (1984), Wolf (1986), and Swanson (1986) to explore caring behaviors in various settings. Caring studies were aimed to determine the important

and least important caring behaviors as perceived by nurses and patients. Watson's caring concept denotes on transpersonal caring relationship as a moral ideal to meet the pre-operative patients' needs to achieve the quality of caring practices in regardless of specific setting. Caring Behavior Assessment is congruent with the ten carative factors developed by Watson (1979). Watson has a strong concept on measuring transpersonal caring relationship both nurses and patients. CBA was employed in Myocardial Infarction patients who must have anxiety (Cronin & Harrison, 1988). Parson et al. (1993) also used this questionnaire and Watson's concept as framework to rate the important caring behaviors in perioperative patients. Study to describe nurses' perception and patients' perception of caring practices in pre-operative phase is required to monitor and to improve professional competences.

Pre-operative Anxiety

This review includes definition of anxiety, the causes of pre-operative anxiety, impacts of pre-operative anxiety on surgical patients, and previous studies relate to pre-operative anxiety. Anxiety is a state of uneasiness, unpleasantness, tension, insecurity, nervousness, worry, and apprehension caused by activation of the autonomic nervous system (Gaberson, 1991; Spielberger, Gorsuch, & Lushene, 1983). Pre-operative anxiety refers to a state in which the individual feels uneasiness, tension, insecurity, nervousness, worry, and apprehension manifested by activation of the autonomic nervous system in anticipation of surgery (Gaberson, 1991; 1995).

Various aspects cause pre-operative anxiety in surgical patients. The causes of pre-operative anxiety include hospitalization (Grieve, 2002), fear of surgery, pain, anesthesia, surgical procedures, and unconsciousness (Badger, 1994, Mitchell, 1997;

2000; 2003). Surgical patients' concerns are usually about their general health, uncertainty regarding the future, the types of surgery (White, 1986), anesthesia, discomfort, being unconscious, admission before operation (Mitchell, 1997; 2000; 2003; Mulidah, Asrin, & Mardiyono, 2001), fear of death (Egan, Ready, Neissy, & Geer, 1992), and psychiatric disease; depression, anxiety (Caumo et al., 2001).

The impacts of pre-operative anxiety for surgical patients correlate to post-operative anxiety, post-operative pain (Caumo, Broenstrub & Fialho, 2000; Caunt & Edward, 1992; Lan, 1999), and wound healing (Gould, 1999; Umbreit, 2000). Reduction of pre-operative anxiety to moderate levels can help surgical patients to prepare for surgery (Salmon, 1993). Reduction of pre-operative anxiety can positively affect the reduction of post-operative anxiety (Caumo, Broenstrub & Fialho, 2000; Caunt & Edward, 1992). In 70 cholecystectomy patients in China, Lan (1999) found a significant and positive relationship between the pre-operative anxiety and post-operative pain ($r=.422$, $p<.001$).

Previous studies have explored pre-operative anxiety. Gilles, Smith, and Parry-Jones (1999) found that 13 % of adolescent surgical patients encountered anxiety. In China, Wang and Xu (1991) found that 80 % of elective surgical patients had pre-operative anxiety to relate to possible pain (N=100). Liang, Liu, and Du (1994) also found that patients of elective major abdominal surgery (N=36) and gynecological surgery (N=24) had high levels of pre-operative anxiety during the night before surgery.

Caring Practices in Reducing Pre-operative Anxiety

In this section, review of caring practices in reducing pre-operative anxiety encompasses two sequential caring practices: assessment-evaluation and intervention of pre-operative anxiety. Intervention of pre-operative anxiety covers non-pharmacological and pharmacological intervention (Cupples, 1991; Erniyati, 2002; Mitchell, 1997; 2002).

1. Assessment-evaluation of pre-operative anxiety

Assessment-evaluation of anxiety refers to actions to determine or evaluate effects and the levels of anxiety. Johnson (1993) revealed that the effects of anxiety included physical, perceptual, cognitive, and behavioral perspectives. Badger (1994) mentioned that the levels of anxiety ranged from mild to panic anxiety. Mild anxiety is associated with the occurrence of tension on daily living, which can motivate learning and creativity. Moderate anxiety is caused by immediate concerns, narrowing the perceptual field, which are recognized as strong breathing, uneasiness, and headaches. Severe anxiety is marked by a significant reduction in the perceptual field, disorientation, and lack of awareness of the environment, inability to focus on surroundings. Panic anxiety is associated with awe, dread, and terror symphonized with loss of control, inability to do things even with direction, unable to communicate effectively (Carson & Arnold, 1996).

Previous studies mention several tools for nurses to assess and evaluate pre-operative anxiety. The most common tools of anxiety assessment-evaluation are a Visual Analogue Scale (VAS) (Gaberson, 1991) and State-Trait Anxiety Inventory (STAI) (Spielberger, Gorsheu, & Lushene, 1983). The VAS of anxiety is a 10-cm horizontal line with defined ends representing extreme limits, the left end of the line is

labeled as “no sensation”, and the right end of the line is labeled as “as much as could be possible be” (Gaberson, 1995). The STAI measures general feeling as a trait and a particular feeling at the time as state. The questionnaire consists of 40 items, 20 items evaluating trait anxiety and the other 20 items evaluating state anxiety (Spielberger, Gorsuch, & Lushene, 1983). These two tools of anxiety are less evident in everyday nursing practice. In addition, anxiety assessment-evaluation may rely on listening and talking to patients, questioning, and discussion through interview (Shuldham, Cunningham, Hiscock, & Luscombe, 1995). Lo Biondo-Wood and Haver (1986) used the Graphic Anxiety Scale (GAS) for measuring anxiety of patients at the time on a scale that includes calm, slightly anxious, moderate anxious, very anxious, and extremely anxious. Each point is given a numerical value.

Assessment-evaluation is a very important factor in reducing pre-operative anxiety. Shuldham et al. (1995) stated that pre-operative anxiety is a recognized nursing diagnosis. Nurses need to make an accurate assessment of anxiety like pain, which has been defined as ‘whatever the experiencing person says it is, existing when the experiencing person says it does’ (McCaffery, 1972, pp.8). Manias (2003) explored caring practice in surgical anxiety. The finding showed that assessment-evaluation of surgical anxiety was a major concern for surgical nurses.

In summary, assessment-evaluation of pre-operative anxiety covers effects and the levels of anxiety to determine nursing diagnosis of pre-operative anxiety. Assessment-evaluation of pre-operative anxiety is similar to assessment-evaluation of pain where nurses have to listen to and believe in what a patient says about his or her feelings. The visual analogue scale is commonly used in clinical settings to examine the level of anxiety.

2. Pre-operative anxiety Interventions

There are two main interventions for pre-operative anxiety:

Non-pharmacological interventions

Non-pharmacological intervention refers to alternative and complementary therapy as independent nursing intervention, which can alleviate pre-operative anxiety. It includes disseminating psycho-educational information, available nursing presence, psychological support, promoting positive self-efficacy (Cupples, 1991; Mitchell, 1997; 2002), and distraction, such as relaxation, watching television, and music therapy (Markland & Hardy, 1993; Wang et al., 2002), touch (Journeaux, 2002). The information care provision consists of five types: surgery procedures, behavioral instructions, possible sensory experience, operating-room environment, and details of anesthesia (Mitchell, 1997; 2000; 2003; Mittisorn, 2001; Mordiffi, 2003), risk of surgery, prognosis of surgery, and anesthesia (Vuoresheimo & Leino-Kilpi, 1993). Because of the various qualifications of nurses and delivery problems, the use of structured rather than unstructured pre-operative teaching is recommended (Dalayon, 1994). Procedural information and sensory information were disseminated for orthopedic surgical patients resulting in significantly lower pre-operative anxiety than patients who did not receive it (N=30, $p<.05$) (Sarcharem, 1992). A combination of information support and psychological support is more effective than information or psychological support alone in relieving anxiety (Mumford, Schlesinger, & Glass, 1982). Combination between information and coping instruction also reduced pre-operative anxiety effectively in adolescents (N=109) (LaMontagne, Hepwoth, Cohen, & Salisbury, 2003; Salmon, 1993). Pre-operative visits by nurse reduced pre-operative anxiety (Martin, 1996). Promoting positive self-efficacy, nurses encourage

patients who experiences positive feelings and enable to cope with anxiety (Mitchell, 2000).

Many studies have attempted to identify benefits of anxiety by non-pharmacological intervention. Mitchell (1997) found that psycho-educational intervention could significantly reduce pre-operative anxiety level in gynecological patients (N=154). Kooariyakul (1995) also supported this finding that mastectomy patients had less pre-operative anxiety after receiving educational program with emotional support than patients who did not receive it (N=20, $p < .01$). Belleau, Hagan, and Masse (2001) found that dissemination of psycho-cognitive educational information on the day before surgery resulted in a significant reduction of pre-operative anxiety ($p = .03$) in women waiting for mastectomy with experimental group (N=60). Lin, Lin, and Lin (1997) revealed that educational program with an instruction booklet and videotape resulted in experimental group of total knee arthroplasty patients in performing exercise more regularly and correctly than those in control group (N=60). Shuldham (1999) suggested the method of pre-operative education with an audiotape for 40 minutes. Xiuyue (1999) conducted effects of the preoperative instructional manual for abdominal surgical patients and found that there was a significant decrease of preoperative anxiety levels after receiving preoperative instruction (N=20, $p < .01$).

Martin (1996) studied the effects of pre-operative visits by nurses on surgical levels of anxiety that the finding was a significant decrease in anxiety level. Hughes (2002) also support this finding that a pre-operative visit by an anesthetist can reduce pre-operative anxiety and related signs and symptoms, such as fear of pain and fear of not waking up. Watt and Brooks (1997) also revealed that the most popular

method for receiving the pre-operative information was via a pre-operative visit from nurses. Related to support, Lenzhi (1997) found that partner and family members or relatives support in China were significantly negative correlation with pre-operative anxiety in surgical patients (N=80).

Holden-Lund (1988) studied the effects of an audiotape series employing Relaxation with Guided Imagery (RGI) for 20 minutes in cholecystectomy patients (N=24). The finding demonstrated that RGI reduced significantly on pre-operative anxiety ($p<.05$). Halpin, Speir, CapoBianco, and Barnett (2002) also emphasized that guided imagery, a simple form of relaxation, can reduce pre-operative anxiety.

Gaberson (1995) recommended the use of music therapy in pre-operative patients. Similarly, Wang, Kulkarni, Dolev, and Kain (2002) evaluated the effectiveness of music therapy for 30 minutes on pre-operative anxiety in day surgical patients. The finding was a significant decrease of pre-operative anxiety level compared with control group (N= 93). Evans (2002) also supported this finding that meta-analysis with six randomized control trials clearly demonstrated that music therapy effectively reduced anxiety of experimental group. Augustin and Hains (1996) found that combination music therapy and pre-operative instruction significantly decreased pre-operative anxiety for ambulatory patients. Patients who listened to their choice of music before surgery and received pre-operative instructions had significantly lower heart rates, blood pressure, and respiratory rates than those who only received pre-operative instruction (N=42).

Gaberson (1995) recommended the use of an audiotaped comedy in pre-operative patients. Suparakjinda (1994) found that humorous media with tape and comic for 20 minutes in pre-operative patients was significantly different from

patients who received ordinary information (N=45, $p < .01$). Schrecengost (2001) recommended the use of pre-operative instructions and humor in pre-operative teaching. Walker (2002) also revealed that music therapy, humor, and guided imagery have been shown to be effective in reducing patients' pre-operative anxiety. Norred (2000) emphasized that hypnosis, aromatherapy, massage, and guided imagery as integrative caring-healing therapies can minimize pre-operative anxiety.

Kamwicha (1991) studied touch therapy for waiting surgical patients and the finding showed significantly lower pre-operative anxiety than patients that did not have touch therapy (N=60, $p < .001$). Journeaux (2002) also supported this finding that touch as a communicative approach can reduce pre-operative anxiety.

In summary, non-pharmacological intervention for reducing pre-operative anxiety includes disseminating psycho-educational information, approaching by psychological support, promoting positive self-efficacy, and distraction. These have significantly reduced pre-operative anxiety.

2.2 Pharmacological interventions

Pharmacological intervention of pre-operative anxiety refers to nurses' actions to provide effective and therapeutic sedative drugs to alleviate patients' anxiety before and after surgery. Pharmacological intervention includes anxiolytic premedication or patient-controlled administration and sedative drugs. Smith and Pittaway (2002) reviewed 29 reports and 14 studies regarding patient-controlled administration with data from 1263 patients. The three main drugs employed were benzodiazepines, beta-adrenoceptor blockers, and opioids. Sedative drugs are usually used in pre-operative patients, such as midazolam 4 mg, propranolol 10 mg (Bernard, Faintreny, Leinhart, & Souron, 1996), diazepam, and followed by lorazepam (Kain,

Mayes, Bell, Weisman, Hofstadter, & Rimar, 1997). In addition, anxiolytic premedication and sedative drugs are usually administered by parenteral and orally. Kain et al. (1997) studied premedication in the United States, the premedication drugs were administered intravenously, intramuscularly, and orally.

Studies have described the effects of anxiolytic premedication and sedative drugs in clinical settings. Lepage, Drolet, Girard, Grenier, and DeGagne (2001) stated that anxiolytic and sedative drugs are regularly administered before surgery for calming patients. Winwood and Jago (1993) examined the effects of propofol on anxiety in day-case patients (N=25). The finding showed that patients who received propofol 10 mg had significantly lower anxiety level than the control group. Lepage et al. (2001) found that anxiety can be managed with midazolam 4 mg in patients with non-surgery (N=50).

To sum up, pharmacological interventions of pre-operative anxiety include anxiolytic premedication and sedative drugs. Premedication drugs alleviating pre-operative anxiety are benzodiazepines, beta-adrenoceptor blockers, and opioids. Sedative drugs are usually used in pre-operative patients, such as midazolam 4 mg, propranolol 10 mg, diazepam, and lorazepam. Premedication is administered by injection, and orally for reducing pre-operative anxiety

Perception of Caring Practices in Reducing Pre-operative Anxiety and Related Factors

Review of nursing literatures in this section includes nurses' perception and patients' perception of caring practices and their related factors. Perception is described as a person's way of knowing of something that can be heard, seen, and felt

(Hornby, 2001). According to King (1981, p.20) perception is defined as an awareness of people, objects, and events. Manias (2003) studied caring practices in surgical anxiety for the post-operative gastro-surgical patients in Melbourne (N=6). Nurses rarely assessed anxiety regarding difficulties in sleeping, restlessness, sweating, fast and slow breathing, and being tearful. Patients' medical condition, operative procedure, and communication also influenced assessment-evaluation of pre-operative anxiety. Patients in this study were described as distressed and teary and nurses' role of pharmacological anxiety intervention was clinical judgments extending beyond the practice of administering anxiety whether choosing a moderate or strong medication and altering the route of administration. The study mentioned factors of caring practices, which cultural and linguistic issues influence nurses' perception of caring practices in surgical anxiety. Nurses should be aware of cultural and linguistic diversity, which relates to experience of anxiety. Furthermore, related factors influence nurses' perception of caring practices in reducing pre-operative anxiety including age gender, and personal ideals.

Previous studies found that gender of surgical nurse influenced caring practices. Female nurses perceived caring practices in more technical and professional aspects than males (Ekstrom, 1999; Greenhalgh, Vanhanen, & Kyngas, 1998; Watson & Lea, 1998). They perceived caring in psychological terms into caring in applicable actions, such as independent nursing and collaborative interventions. The older nurses perceived that they practiced more technical and professional aspect than the younger (Watson & Lea, 1998). Age of nurses also influenced perception of caring practices. On the other hands, age and gender of nurses did not influence nurses' perception of nursing behaviors (Cronin & Harrison, 1988a; Larson, 1984; Nahas, 1997; Parsons,

Kee, & Gray, 1993). Personal ideals regarding self-awareness, personal factors, and situational factors also influenced nurses' perception of caring practices (Corbett, 1995). In fact, there are inconsistencies related to factors, such as nurses' age and gender, whether these influence caring practices in reducing pre-operative anxiety.

Related factors influence patients' perception of caring practices in reducing pre-operative anxiety including age, gender, educational backgrounds, and length of hospital stay (William, 1997). However, some studies revealed that patients' educational background, number of admission to hospital, and lengths of hospital stay did not significantly influence patients' perceptions of caring practices and importance of caring behaviors were for patients (Cronin & Harrison, 1988a; Huggins, Gandy, & Kohud, 1993; Larson, 1984; Mullins, 1996; Nahas, 1997; Parsons, Kee, & Gray, 1993).

Although some previous studies found that perceptions of caring practices vary with age and gender, other related factors such as educational backgrounds, working experience, and length of hospital stay may or may not influence nurses' and patients' perception of caring practices. The descriptive study on perception of caring practice in reducing pre-operative anxiety is then required and to determine some related factors.