CHAPTER II

ESSAY

The following paragraphs contain information obtained from litterateur review. This includes preoperative nursing care, problem situation in operation room, quality development studies, the concept of nursing quality assurance, pre-operative nursing care quality evaluation and participation action research.

2.1 Perioperative Nursing Practice

Perioperative nursing practices are nursing activities conducted by registered nurses in caring for operative patients at all of the three phases; pre-operative, intraoperative and post-operative. Pre-operative phase begins when the patients is scheduled for surgery and ends with the transfer of patient to the operation room. The intraoperative begins when the patient is transferred to the operation room and ends when the patient is transported to the recovery room. The post-operative phase extends from the recovery period to a follow-up at home or a clinic visit. (Rothrock, 1996: p. 3).

The role of the preoperative nursing team, now emphasizes on health promotion to encourage patients and family self – reliance and maintain healthy status physically, psychologically, socially and spiritually. In providing care for surgical patients, the nurse uses the nursing process and standards of preoperative nursing practice. The nursing process involves four steps; nursing assessment, planning of nursing care plan, nursing intervention and evaluation and revision of nursing care plan (Uniphan, 2000, p. 24). Nursing care must follow the nursing standard, being systemic and consistent to ensure patient's safety, well-being and rapid recovery.

This study focused on pre-operative nursing care because it is the essential initial nursing care that leads to the continuity of nursing care in later stages. Its quality will help decrease the risk to patients and result in good quality of nursing care.

2.1.1 Pre-operative nursing care

According to The Thai Operating Room Nursing Association (2001, p. 22-25) and The Division of Nursing, MoPH (2001), nursing standard in operating room shall include the followings.

1. Problem and patients' requirement are assessed by pre-operative nursing team to prepare the readiness of patients as follows:
    1.1 Pre-operative visiting :-
        1.1.1 Patient assessment to collect information focusing on factors related to surgical experience including physical condition, mental status, and socio-cultural status as well as teaching and learning needs.

1.1.2 Verification of documents including operative consent form, physical examination and other laboratory investigation reports.

1.1.3 Preoperative teaching to explain the preoperative, intraoperative, and postoperative routines involved in the impending surgical procedure.

1.1.4 Providing opportunity for the patient and family to ask questions or express concerns.

1.1.5 Coordinating with ward nurses when patients be transported.

1.2 Coordinating with surgeon and preoperative team for preoperative care plan and anesthesia especially for major operations.

1.3 Pre-operative nursing care at the waiting area of the operating room.

1.3.1 Assessment of patients readiness: patient condition by observation and review of patient record and reports on preoperative assessment sheet which include laboratory report, X-rays and others special testing, physical assessment, current medical diagnosis, previous hospitalizations, occupational, financial, educational, social, spiritual data, surgical consent, allergies and consultation with other members of the health care team.

1.3.2 Checking patient's identification and operation care plan.

1.3.3 Checking for patients' anxiety or not-well symptoms.

1.4 Anesthetic nurses evaluate the completeness of anesthesia.

1.5 Provision of comfort and supportive care to reduce patients' stress and anxiety.

2. Preoperative nursing team prepare medical equipments and operating facilities and be ready to attend the operation.
   2.1 Circulating nurse
      2.1.1 Assures that the sponges, needle, and instrument counts are correct.
      2.1.2 Verifies surgical site
      2.1.3 Check completeness of supplementary equipments in emergency case
   2.2 Scrub Nurse
      2.2.1 Getting ready to attend the operation
      2.2.2 Prepare instrument & supply and check the completeness
   2.3 Anesthetic nurse
      2.3.1 Checking the completeness of anesthesia set
      2.3.2 Getting ready to attend the operation

The results of pre-operating nursing care are:

1. Patients has been assessed for their readiness in physically, mentally and emotionally.
2. Patients and family are aware of changes that might happen to the physical during pre and post-operation.

3. Patients feel comfortable and secured when he/she is moved into operating room.
4. Patients being operated in the most prepared environment.

Several studies have reported that patient's preoperative anxiety level reaches peak level within 24 hours before surgery (Chapman, 1977). As they are separated from family to be in unfamiliar environment where they can see only staff' eyes, and unusual equipments (Arejsumlee, Hunghoeng, & Auprasert, 1991). Therefore, nursing activities in this period are essential for keeping security and safe feeling of patients.

2.2 The concept of operating nursing care on the quality of operating nursing care composes of: (Ajsamlee, 1999, p. 39)

1. **Positive outcome of nursing care** the examples are saving time and patients being satisfied and safe, self-reliant and being accepted by their rights.
2. **Nursing documentation** which shows quality and continuity of nursing care. The aim of nursing documentation is to monitor nursing care process. A good nursing documentation should reflect the quality of nursing care. In management, it is a tool for supervising (Potter & Perry, 1995) and it is a direct responsibility of registered nurse (Division of Nursing, 1999). The development of nursing professional can be achieved by using nursing documentation. It is a reflection of nursing care standardization compliance

because documents are usually linkages between law and regulation and nursing care. Lyer (1994) and Fischbach (1991) stated that, a comprehensive nursing document could measure 1) the quality of structure such as the ratio of patients per staff, 2) nursing care procedures such as daily nursing care, and 3) nursing care outcome such as reaction or change in patients. Documentation can be used as a tool for quality assurance because it is a practice of standard.

3. **Nursing care standard**. This can be achieved by applying standard set by the Division of Nursing, MoPH (who defined role, job description and main nursing activities) to the nursing practice. Nursing practice standard emphasizes on positive outcome for patients and family and indicate responsibility, accountability and capacity of nursing professional.
4. **Nursing quality assurance** can be used as nursing outcome measurement (Ajsamlee, 1999, p. 38-39) The quality of nursing care is a result of effective management and the application of nursing procedures to practice which include continuous monitoring and evaluation (The Division of Nursing, 1998, p. 11).
    - 4.1 Nursing Care by the nursing process is the responsibility of nurse professional.
    - 4.2 Patients can ask for their rights and can expect for the quality of services.
    - 4.3 Leadership and the ability in management of each level of nursing administrators is essential for quality-service management.

4.4 Registered nurses are responsible for the quality of services and professional practice assurance.

4.5 The development or improvement of nursing quality must be based on facts or evidences.

In summary, the quality of preoperative nursing care composes of the outcomes of nursing care which satisfy and ensure patients safety; the nursing documentations which are standard and being accredited for quality.

2.3 Measurement of Pre-operative nursing care quality

Pre-operative nursing care quality measurement can be divided into three categories as outcome measures, process measures and structural measures. (Rothrock, 1996, p. 16-27; Thai Operative Room Nursing Association, 2001, p.22-25; The Division of Nursing MoPH, 2001, p. 225-250; Buddharangsee, 1999; Friedman, 1995; Widtfeldt, 1992, p. 26-332). This concept developed from Donabedian's guideline in 1980. All three components can be examined individually as indicator of quality. The patterns of measurement are as follows.

1. Structural measures include measurement of organizational characteristics of nursing services, facilities, equipment, human resources, environment, and policy. It reflects the system and resource utilization in operative-nursing care.

2. Process measures reflect the need of patient in caring and conforming to the established standard of nursing practice.
3. Outcome measures focus on the end results of nursing care processes on the health and well-being of patients. For preoperative nursing, this component refers to the extension of achieving expected outcomes or the decrease of undesired outcomes as perceived by the patient.

Even though, it is applied, Friedman (1995) suggested that, it is difficult to distinguish between process measurement and outcome measurement because they are related and its strengths and weaknesses rely on basic concepts in researching. The outcome measurement must be carefully interpreting especially in monitoring of quality improving process because the outcome always relates to process. When process changes, outcome will be changed too.

Evaluation of quality alone is not sufficient. The methodology for evaluation of nursing care efficiency is another appropriate tool using the Clinical Value Compass : CVC. It has a framework to measure outcomes, expenditures and quality. (Beyea, 2000) This measurement composed of 4 aspects as follows:

1. Biological outcomes: such as morbidity, mortality, complication rate, diagnostic tests and laboratory finding, infection rates, resurgery.
2. Functional outcomes: such as the functions of physical, psychological, anxiety level, social and role function, and health status.
3. Satisfaction: such as patients and family members' satisfaction forward nursing care process and outcomes: such as teaching, pain management,

caring, timely care, congruence of expectations, family member teaching, and satisfaction of care provider.

4. Cost: This is divided into 2 types
    - Direct cost includes the cost of care, follow-up visit, medication, and other treatments.
    - Indirect cost includes the patient day away from work or usual activities, cancellation rate, length of time.

The Division of Nursing (1999) has defined indicators of the quality of preoperative nursing care which are similar to the above concept. There are 6 categories al follows:

1. Nursing administration system.
2. A decrease of nursing care cost.
3. Protection of patients' rights.
4. Health service access.
5. Nursing service quality.
6. Satisfaction of patients

Based on the concept of nursing measurement and quality of relevant and similar studies, the researcher select evaluation method to achieve 4 objectives as follows:

1. To decrease the duplicating role of pre-operative nursing care among preoperative and anesthetic nurses (structure evaluation).

2. To formulate pre-operative nursing practice guideline with standard (Process evaluation).
3. To decrease incidence of cancellation or delaying of the operation (Outcome evaluation).
4. To increase Patients satisfaction toward pre-operative nursing care (Outcome evaluation).

2.4 Concepts of nursing care quality development for operative patients

Association of the Perioperating Room Nurses (AORN) and Nursing Practice Committee (NPC) applied the guideline of the nursing service development by Joint of Committee Accreditation Health Care Organization (JCAHO) composed of 10 steps (Auprasert, 2000 , p. 1-4, Sherman, 1997, p. 45) as follows:

1. Assign responsibility
2. Delineate the scope of preoperative nursing care.
3. Identify important aspects of preoperative nursing care
4. Identify indicators related to these aspects of nursing care.
5. Establish standard level for evaluation related to the indicator.
6. Collect and organize data.
7. Evaluate nursing care quality from the analyzed data.
8. Take actions to improve nursing care.
9. Assess the effectiveness of the actions and document improvement.

10. Communicate relevant information to the quality assurance committee.

These are similar to steps of problem solving based on TOT (Total Quality Transformation) which composed of 9 steps as follows:

1. Seeking for development opportunities, analyzing for improvement area and assigning the responsibility.
2. Make understanding of on-going process.
3. Evaluate the results of present work; write working flow chart to enable problem identification.
4. Analyze for cause of poor quality.
5. Analyze for appropriate alternatives for quality improving Step 1-5 in preparation for planning
6. Experiment alternatives
7. Measure, review and check system
8. Adjust standard by considering of results expanding and application.
9. Continuous adjustment planning, seeking for improvement areas.

   Step 6-9 are in development and improving process

The above process is similar to the cycle of quality development start at a step of systemic, on-going process, measurement/proving and examination and include system improving by problem solving. At present, new nursing pattern are being developed which are different from the previous concepts. There are health promotion for operative nursing care by the framework of health promotion of French (Snape, 2000) in dimension of disease management, disease prevention, health education and

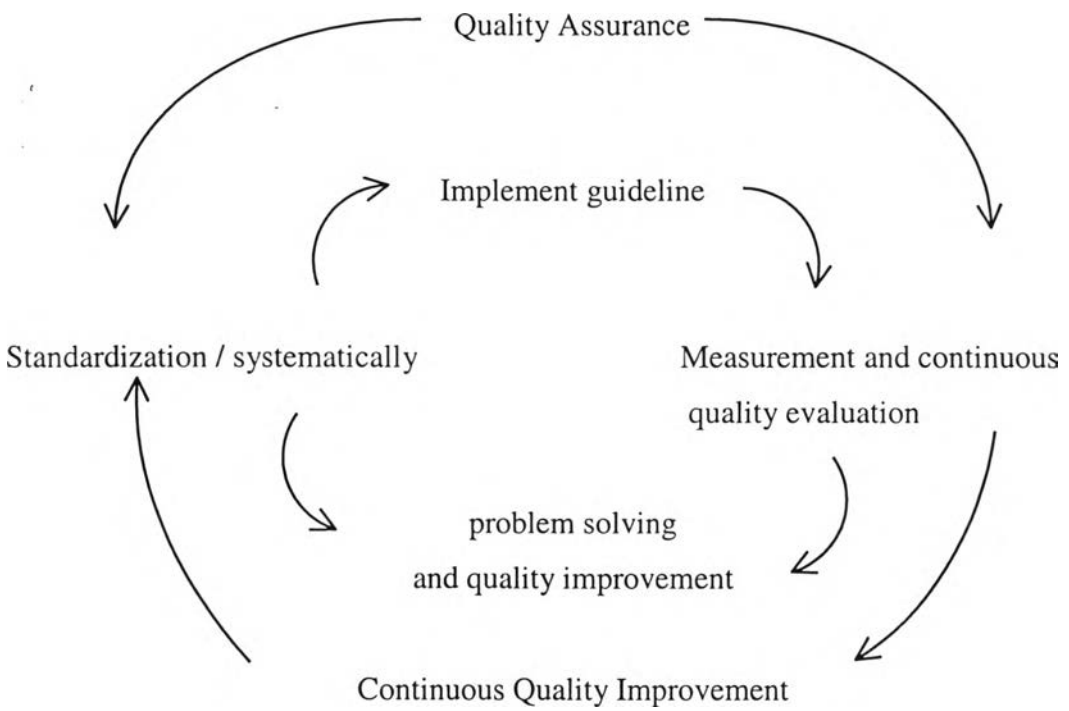
policy of health. In the dimension of disease management, he stated that, the operative nursing care starts at the assessment of problems and patients requirement and continue through to data analysis, formulation of diagnosis, nursing care outcome identification, implementation and evaluation. In the dimension of disease prevention, it includes control of hygienic technique, prevention for complication from patients' incorrect position and accidents. In the dimension of health education , it starts at a pre-visiting to patient 1 day prior to operation to provide necessary knowledge in operating to decrease anxiety.

In this study, the researcher applied the concept of hospital accreditation and preoperative nursing care by The Division of Nursing, MoPH (2001) which has been developed for 20 years and continuously improved to comply with the law of nurse professional 1997. The concept of quality assurance refers to the formal management and continuous activities in measurement and evaluating of nursing quality for structure, process and outcomes to ensure that, nursing care unit and practitioner provide standard service, and continuously improve the quality to meet the quality level expected by the profession and the organization. This quality standard contrasts of 4 main components.

1. Establishment of nursing standard or system.
2. Nursing practice complying with the standard.
3. Continuous monitoring and evaluation of quality.
4. Immediate problem solving when problems are identified and has continuous quality improvement.

These components and continuous dynamic cycle are as shown in the following figure 2.1

Figure 2.1 Continuous quality improvement process and nursing quality assurance cycle (The Division of nursing, 2001, p. 6)



In health care setting, attention has been focused on quality assurance. Quality assurance involves the granting of licensure and accreditation to hospital and surgical services. It measures and qualifies the preoperative care. According to the Hospital Accreditation of Thailand, health care organizations must develop ongoing quality assurance program, pursue opportunities to improve patient care and resolve the identified problem. Today's health care consumers are more educated and expect high levels of service, in return it contains the high cost of health care. (Sherman, 1997, p. 44-48). Quality assurance is a pledge to each patient with established preoperative

standards by the Hospital Accreditation of Thailand. The researcher, who is a professional nurse, can play a major role in improving quality of preoperative care that enables effective surgical care. The aim of the research is to provide collaborative to meet individual patient need and achieve standard of preoperative care. The interpersonal relationships associated with different practice had a significant effect on job satisfaction. Nursing care delivery systems based on different practice were shown to contribute to a hospital's overall productivity and fiscal viability . A review of literatures indicates that some aspects of the past and current practice approaches were incorporated into preoperative team. This study emphasizes on autonomy, authority, and accountability of professional nursing practice by promoting an open system of care in which information is shared among preoperative and anesthetic nurses. Collaborative practice arrangements in the form of group practice are supported and facilitated to ensure appropriate achievement of expected clinical outcome. Preoperative care delivery that lack coordination and promote duplication and fragmentation of services are evaluated.

The researcher has applied the concept of nursing quality assurance into this project. The cycle of participation practice ensure that nursing care process be qualified and utilized as expectation and that there are a continuous measurement and quality evaluation.

2.5 Problem situation in pre-operative phase and nursing quality development.

Several researches in hospitals applied patient visiting strategies to develop nursing 's quality and found that pre-operating patient visit can decrease patients anxiety and improve the efficiency of nursing care in operating room. This is supported by many studies such as the study of pre-caesarean section anxiety at Maharajnakhon Chiang Mai which makes comparison between patients who received pre-visit and those who did not receive. Sansiribhun (1997) found that the pre-caesarean visit by preoperative nurse reduced the pre-caesarean woman's anxiety when they stay at ward the day before surgery. This result is supported by studies of Assamlee, Hunghoeng, & Auprasert (1991); Poonsombat et al., 1993)

International researches have similar results but different in patient visiting. For example, the study of Beddows (1997) on alleviating pre-operative anxiety in patients a study both of male and female group, during 18-65 years old who were admitted for hernia and varicose vein operations. Nurses visited patient and provided them the necessary information prior to admission for operation and on the first day of admission. The study showed that the giving of information pre admission for surgery could alleviate anxiety. There were other similar studies but different in details of visiting.

In summary, pre-operative visiting is very importation in providing preoperative nursing care service. Nurses have knowledge about operation both pre and post-

operative nursing care obtain practical skills for interviewing , observation and data collecting which are essential for evaluating patients situation and effective visiting. The advantage of pre-operative visiting (Atkinson by Auprasert, 2000: Damrongsit, 2000, Phanat Nikhom hospital, 1999, Poonsombat et al., 1994) are (1) Nurse can approach to find out the feeling of patients and gain information for holistic care planning (2) Nurse can evaluate both of physical and psychological of patients for pre-operative nursing care (3) Operating procedures are effective and continuous (4) Encourage the relationship between nurses and patients (5) Gain information for comparison with the expected nursing outcome post operating and (6) Encourage proud feeling in nursing professional and stimulate professional growth

But there are many constraints in pre-operative nursing care as follows :

(1) The limitation of administrative structure in providing service Include personnel and timing.

(2) The lack of skills of the perioperative nurse in patients visiting regarding relationship and providing information.

(3) The incomplete understanding of the changing role of operative nursing and the lack of co-ordination among operative nurse , anesthetist and ward nurse in providing information to patients. (Auprasert, 2000; Damrongsit, 2000, p. 31-34; Boonjaroen et al., 2000, p. 35-39)

Relevant study about problems and constraints in operative nursing care is conducted by Prechanond & Nualclai (1997) who evaluated the quality of nursing care and constraints in applying operative nursing standard of 92 registered nurses in ENT,

orthopedics, gynecology and rehabilitation room at Ramathibhodi Hospital. The study showed that the nursing qualities which should be improved are patients assessment of physical , psychological , spiritual and social; the assessment of fear and perception of operation; the completeness of documentaries based on patients right and safety, information provision regarding the environment in operation room and type of operation, problems caused by registered nurse who has insufficient time in giving care.

The study of preoperative nursing activity in Siriraj Hospital comparing to the standard by Kaparedee & Chansukitmetee (1999) showed that there were some activities in preoperative nursing care that had to be improved. This includes skin preparation, giving preoperative, intraoperative, postoperative information, information on surgery and anesthesia.

From those issues, there were projects implemented to develop quality of operation room. Damrongsit (2000) studied about nursing care strategy of operating room at Lampang hospital. The researcher found that preoperative visiting could not carry out continuously due to 1) inappropriate management staff nurse 2) some nurse did not understand the need to expand the preoperative role 3) incoorperation between preoperative, anesthetist and ward nurse in providing information to surgical patient and record in providing nursing care. Both preoperative nurse and ward nurse provide preoperative care instruction to patient which cause duplication of work. This study applies the concept of PDCA (Plan–Do-Check-Act) to improve quality of care. The target groups are patients who were admitted for elective operation. The researcher prepared personnel who provide information to patients by providing relevant

documents and technique to approach patients, teamwork of the preoperative, anesthetist and ward nurses were emphasized. The result showed that the nurses could enhance their work effectiveness and valued other team member. The quality of nursing care has improved which is inconsistant with the study of Swan (1994) who studied the participation in operative nursing care and found that it can improve patients satisfaction significantly and increase the ability of patients approaching the unit.

The result of preoperative quality care development at Choengrai Prachanukhroaw Hospital (Preoperative and postoperative patient education Project) (Boonjareon et al., 2000) indicated that the average score of patient satisfaction pre-post operative visit was only 64 percents (MOPH standard = 70 %). This result was outstanding level of ministry of public health standard. The recommendation for improving patient satisfaction were : (1) provision of preoperative instruction (2) explanation of the disease, nursing care plan, their treatment and surgical procedure (3) nurses' friendliness (4) nurses' attention to patients' personal, special needs (5) safety during transportation (6) provide information about postoperative activities (7) openness/ informality of preoperative nurses team (8) having a clean clothes (9) staff concern for patients' privacy (no noisy operating room).

An investigation conducted by Intharapunya (2000) found that patients' rating of satisfaction in noisy operation room was at the least satisfaction. As identified by Boonjareon et al., 2000, p. 35-39) the problems and difficulties found in operation service usually related to emergency case, and day surgery of patient who had no hospital admission.

In another study, Swan (1994) found that establishing a collaborative relationship with anesthesia providers and preoperative nurses led to significant change in how the caregiver perceive themselves in relation to one another. Furthermore, collaborative practice, with clear role expectation, made a significant contribution to patient satisfaction, cost containment, efficient care and increased access to ambulatory preoperative evaluation service.

The finding of Swan study are speculative, because many of the variables are associated with collaborative practice model, for example, mutual trust, basic understanding and acceptance of the other discipline, mutual respect for each member's individual profession, positive attitudes about oneself, willingness to negotiate on a daily basis. In developing the collaborative model for ambulatory preoperative, the following issues must be addressed: (1) expectation of patients and family, (2) Expectations of nurse practitioners and anesthesia personnel, (3) Expectations of hospital administrative staff, and (4) Reimbursement and payment systems. This model is based on the organization and managerial structure of the institution or environment.

Finding of these studies shows that quality patient care requires the collaboration of collegial relationships between preoperative and anesthetic nurses. Improving the quality of surgical patient care is a key issue of health care in recent years. This is of concern in Phanat Nikhom Hospital as well as internationally. Defining quality patient care will help the nursing profession in fulfilling its function in society. In Thailand (1998) policy about the patient's rights encourages patients to participate more in decision making related to their illness. Nursing care must be individualized to

meet a particular patient's unique needs and situation. It is the nurse's responsibility to meet standard of nursing care. The patient can sue the nurse, if they receive poor quality of nursing care.

At present, surgical care has shifted dramatically from in patient services normally with 7 day admission to a more shortened length of hospital stay (3-5 days). Less patient admission increases patient turnover. This move is driven not only by the economic constraints in health care, but also by the technological improvement in surgical and anesthetic techniques and improvements in postoperative clinical management because this change, surgical care needs to keep track with the trends and continuously development. Preoperative teams actively participate in all aspects of surgical care.

It's considered that, there is a lack of quality in nursing care in pre-operative stage. Various strategies have been developed to solve this problem. However, most strategies are appropriate for big hospitals which have complete facilities only, thus cannot be applied to community hospitals

2.6 Nursing quality improvement and the concept of participatory action research

Participatory action research (PAR) employed a similar methodology as qualitative research. It is an applied research from experiential learning with

requirement of strong participation from all related parties in the research activities including problem identification, operation, implementation, follow up, and evaluation. All personnel including all participants knew all research steps, involved in decision-making, and maintained their intention to solve problems (Whyte, 1991). The research process was carried out based on opinion sharing among members of the organization in order to obtain conclusive agreement for each step. Creating process was that the members gradually developed their potential in solving problems of the organization or community by self-learning. The solution was clear as well as reflecting believes, needs, attitudes, and life-styles of organization/community members.

The critical attribute of participatory action research was involvement of the researcher and the participants in all steps throughout the course of the research project. Running group activities for change and development by fact-finding process involved repetitive activity cycles each with 3 steps, which were planning, implementation, and evaluation of the implementation process. The research process had been continuously improved. Kemmis and Mc Taggart made it easy to understand and it had been extensively employed (Roll & Hughes, 1998).

The definition of participatory action research was a research that combined problems or questions as reflection of the work of any community or organization in order to develop their principles, rationale, and work procedure to obtain direction or model for quality improvement of such work. At the same time, it was improvement of understanding about the work in corresponding to social conditions and related situations. The strength of this research was collaboration of all members in in-depth

analysis in case of successful organization (Kemmis & Mc Taggart, 1990). It was collaboration between the researcher and community members in the process of 1) Improvement of the system to respond to members' needs and 2) helping to develop specific knowledge by increasing capability of the system in providing services to respond individual needs and by improving the ability in using data as guidelines for practices and creating knowledge body in order to increase self-learning ability among members within the system.

This research comprised of fundamental philosophy of action research as follows: 1) There was fundamental believe that values of democracy, truth, justice, and rationale were attention, understanding, and mutual cooperation. People who know the fact about the situation occurred the best were the people who work for that organization and actually experienced such situations . 2) The theory that suggested guidelines for action research was the critical theory, which believed that the facts about good practices were determined by social, political, cultural, economic, community, gender and value factors that were always improved and changed. Society contained conflicts therefore; understanding and solving of such conflicts were required to make such society happy (Denzin & Lincoln, 1994).

In addition, action research in Thailand employed Buddhist doctrine of which process could be explained by the following principles (Chuaprapaisilp, 1998): 1) *Anatta* (or no-self) is the concept of impermanence and everything is subjected to change depending on causes and related factors (*paticca-samuppada* or dependent origination). 2) *Ariyasat* 4: the Four Truths which advocated action research process by

beginning with *dukkha* (understanding of all unsatisfactory states, a lack of standard, and seeing through problems); *samudaya* (understanding of *dukkha*'s arising or causes of the problems); *nirodha* (understanding of *dukkha*'s cessation); and *makka* (the way out of the unsatisfactory states, winning conflicts, and problems) **3)** *Sati* (*Satipathana*): action research was conducted for over a long period of time and the researcher was in close relationship with the participants. Development of teamwork skills, emotional control, unbiased data collection and analysis were necessary. Development of *sati* or mindfulness would, therefore, help to reduce conflicts throughout the action research process, which could lead to development of work practices and knowledge bodies.

In conclusion, participatory action research was a democratic process when a group of people employed the knowledge gained from study research and from self-practices in improving or changing their society. It was a research as well as a work to solve problems and means for resolutions from reflection of their own and group's work. That was in order to develop principles, rationale, and practices to obtain a model or direction for quality improvement of such work. At the same time it was also development of self- and group-understanding about work functions to correspond with social conditions and related situation by using qualitative research method as the principles in data collection and analysis. At the same time collection of quantitative data was not rejected. It was different from general qualitative research by that it required actual practices of activities, analysis of the activities, and improvement of the practices until obtaining satisfactory model or direction. It was a combination of knowledge from theory, practices and research. Actual practical experiments in the real

situation without being controlled did not differentiate the research from work. It reduced gaps between theory, practices, and research.

Therefore, the author adopted participatory action research in development of preoperative nursing care quality as it helped finding solutions to the problems that the operating room nurses were interested in finding answers for their work. It required collaboration between operating nurses and anesthetist nurses who worked in the operating room, in reflecting their ideas and opinions from the work for improvement of nursing care quality. Improvement process could be done by change and development of work procedure, principles, and rationale to obtain a model or direction for preoperative nursing care that responded to conditions, factors, and circumstances of Phanat Nikhom Hospital. It was a combination of knowledge from operative nursing care principles, practices, and research to build knowledge bodies from the work.

Another support rationale was that nursing research found that action research was an effective approach for improvement of nursing care quality. That was development of nursing effectiveness using the relationship between community development and participatory action research. Lindsey (1999) found that it helped operational nurses and research nurses to have more opportunities in receiving actual outcomes and effectiveness corresponding with the social objectives of nursing care. In addition, this corresponded to the study of Chenoweth & Kilstoff (1998), which was the research study on creative change of Alzheimer management in community and the Out Patient Department care program. Participatory action research was carried out in a group of personnel and family members as caretakers of the patients to determine

direction for patient care practices and to evaluate the new treatment program. It was found that application of participatory action research resulted in patients' satisfaction and produced positive results of the treatment program. Other outcomes included development of close relationship patients and their family, reducing depressed symptoms in patients, and family members and caretakers of the patients increased their awareness about their roles with reducing stress. The officers responsible for patient care had chances to review patient care procedure and also received cooperation from community in designing the treatment program.

In addition, Heslop (2000) conducted research on improvement of care cross continuity between psychiatric and emergency services within participatory action research framework at Monash University, Australia. It was found that the participants obtained a systematic pattern for psychiatric care; were able to develop instruments for uses in caring of patients who were at risk of developing psychiatric problems and implemented such instruments within the emergency department of Frankston Hospital. This development was resulted from participation of personnel of all patient care related areas helping the team to develop awareness and cooperation as well as determine a suitable model for patient care.

There were several other support studies that employed participatory action research in patient care management such as study on lifestyle of female patients with multiple sclerosis and urinary incontinence in Australia (Koch et al., 2001). The participants of this research were 4 female patients, 2 continence nurse advisors, and the researcher. There were 5 cycles of action research over 4-month duration. The

topics obtained from data collection by tape recording were maintaining control, seeking understanding, avoiding shame, and positive and negative feelings. The benefit gained from the research was sharing of knowledge and experiences among the research participants and the nurses could use the knowledge and experience in determining nursing practices for patients with these diseases. Furthermore, application of action research resulted in development of collaboration between nurses who provided emergency care to elderly patients in hospital and nurses who cared for patients in community of a small town in Australia. There was a link between healthcare personnel team reducing misunderstanding between patient care roles in provincial hospital. In addition, community nurses helped increase effectiveness of nursing work, creating a connection pattern of patient care system (Robinson, 1999). This was consistent with the study of Dowswell et al. (1999), which found that nurses, physical therapists, and physical therapy coaches involved in creating, developing, training, and reviewing the training program of caring for patients and who required rehabilitation by physical therapy in community hospital in the United States. This research was qualitative research by participatory action research using interviews as a tool in finding for training needs. The research result found that the participants were able to find resolutions to the problems actually encountered at work. This was considered to be important for profession, as it was an opportunity in developing reasonable skills for work in improving patient care.

The established procedure for nursing care practices was acceptable among the operating room nursed because hospital standard was essentially developed from cooperation among the operational personnel. In addition, such standard nursing care

procedure would be a guideline for nursing care practices and in providing related services to produce maximum benefits to operative patients with least errors possible. It was a criterion in assessment of nursing quality in terms of both procedure and outcomes of the nursing services, which were in turn used as fundamentals for systematic and continuous improvement of work process including in potential development of nursing personnel (Nursing Division, 1999). The research results could be also adopted by operating room nurses in providing nursing care services to preoperative patients in any hospital with similar factors or circumstances to promote teamwork, reduce repetition of responsibilities and functions between operating nurses and anesthetist nurses, and to provide holistic care to patients according to the roles of professional nurses. Those resulted in patients' satisfaction with the services, which indicated the actual quality of the nursing services.

It can be seen that application of participatory action research for improvement of nursing and patient care quality helped to develop collaboration among service teams, coordination in patient care, understanding of each service team' roles, reducing misunderstanding between healthcare personnel teams, and finding resolutions to the problem actually encountered during work at that particular service provider. This type of research could be developed by nurses in community hospital, in community, and in various groups of patients so that an effective patient care pattern could be obtained from direct caretakers of the patients and ultimately the patients were satisfied. Therefore, the author selected participatory action research for this study to create collaboration and coordination among the operative nursing team, to obtain direction for preoperative nursing care practices, and that the patients were satisfied with the

preoperative nursing care. The participation was required throughout the research process including making decision whether or not the study research should be carried out in the community; review of situation, evidence, and data to determine research problems; selection and identification of problem issues; creation of instruments; data collection, data analysis, and presentation of the findings; as well as distribution of the research knowledge into practices.

References

Arejsumlee, R., Hunghoeng, P., & Auprasert, K. (1991). The effect of Structured Pre-Operative Visit by Operating Room Nurse on Anxiety Level of Pre-Operative Patients at Siriraj Hospital. Journal of Nursing 4(9) : 194-204.

Arejsumlee, R. (1999). Operating room nurses: Proactive roles. The 4th Academic Conference of Thailand Operating Room Nurses Association: Proactive roles of operating room nurses July 17-18 : 37-47.

Auprasert, K. (2000). Strategy of Preoperative Visit. Thai Operating Room Nurses Journal 5(1) : 1-5.

Auprasert, K. (2000). Quality Improvement in Preoperative Nursing : Hospital Accreditation. Thai Operating Room Nurses Journal 5(1) : 1-5.

Auprasert, K. (1999). Direction of preoperative nursing in the new millennium. Thai Operating Room Nurses Journal 4(2) : 1-5.

Beddows, J. (1997). Alleviating Pre-Operative Anxiety in Patients: A Study of Nursing Standard. Nursing Standard Online: Research Home Page.

Beyea, S.C.. (2000). Evaluating patient care programs. Available from : http://www.aorn.org/journal/2000/jan2krc.html.

Boonjareon, S., & (et al). (2000). Operational outcomes of the quality development project of operative care services, Chiangrai Prachanucroa Community Hospital (The project of educational promotion for patients and their relatives during pre- and post-operation period). The 5th Academic Conference of Thailand Operating Room Nurses Association: Direction for development of operative nursing quality. 35-39.

Chapman, C.R. (1977). Determinants of anxiety in elective surgery patients. In : Spielberger, C.D., Sarason, I.G., eds. Stress and Anxiety 4 : 269-290.

Chenoweth, L., & Kilstoff, K. (1998). Research Paper Facilitating Positive Change in Community Dementia Management Through Participatory Action Research. International Journal of Nursing Practice 3(4) : 175-188.

Chuaprapaisilp, A. (1998). Action research. Song Kla : Department of Nursing Science, Songklanakarin University.

Damrongsit, P. (2000). Strategy of nursing care of operating room at Lumpang Hospital. The 4th Academic Conference of Thailand Operating Room Nurses Association: Proactive roles of operating room nurses : 37-47.

Denzin, N., & Lincoln, Y. (1994). The handbook of qualitative research. London: Sage Publications.

Dowswell, G., & (et al). (1999). The Development of a Collaborative Stroke Training Program for Nurses. Journal of Clinical Nursing 8(6) : 743-752.

Fairchild, S. (1993). Perioperative Nursing Principle and Practice. Boston: Jones and Bartlett.

Fischbach, F.T. (1991). Documenting Care: Communication-the Nursing Process And Intervention Standard. Philadelphia: F.A. Davis.

Friedman, M.A. (1995). Issue in Measuring and Improving Health Care Quality. Health Care Financing Review 4(16) : 1-18.

Heslop, L. (2000). Improving Continuity of Care Across Psychiatric and Emergency Service: Combining Patient Data within a Participatory Action Research Framework. Journal of Advanced Nursing 31(1) : 135-143.

Holter, I.M., & Schwartz-Barcott, D. (1993). Action Reseach: What is it? How had it been used, and how can it be used in nursing?. Journal of Advanced Nursing 18 : 296-304.

Intrapanya, B., & (et al). (2000). Satisfaction of operative patients, Outpatient department, Chiangrai Prachanucroa Community Hospital. The 5th Academic

Conference of Thailand Operating Room Nurses Association: Direction for development of operative nursing quality. (June) : 40.

Kapraedee, J., & Chansukitmetee, S. (1999). Evaluation of operating room nursing care of Siriraj Hospital. The 4th Academic Conference of Thailand Operating Room Nurses Association: Proactive roles of operating room nurses. 61-62.

Kemmis, S., & Mc Taggart, R. (1990). The action research planner (3 rd ed.). Victoria: Deakin University.

Koch, T., & (et al.). (2001). Research Paper Breaking the Silence : Women Living with Multiple Sclerosis and Urinary Incontinence. International Journal of Nursing Practice 7(1) : 16-23.

Lindsey, E., Sheilds, L., & Stajduhar, K. (1999). Creatung effective nursing partnerships : relating community development to participatory action research. Journal of advanced nursing 29 (5) : 1238-1245.

Lyer, P.W., & Camp, N.H. (1994). Nursing Documentation: A Nursing Process Approach. Journal of Nursing Practice 7(1), 16-23.

Munhall, L.P., & Boyd, O.C. (1993). Nursing research: A qualitative Perspective (2nd ed.). New York: National League for Nursing Press.

Nursing Division. (1999). Nursing standards in hospitals (1st Revised ed.). Bangkok: WVO publishing.

Nursing Division. (2001). Quality assurance of nursing services in hospital: Operative nursing care services (2nd ed.). Bangkok: Thailand Agricultural Cooperatives Publishing.

Phanat Nikhom Hospital. (1996). Opening ceremony of emergency and ICU building "Jaruayboriboon II". Chon buri.

Porapakham, Y., & Pramanpol, S. (Eds.). (1993). Participatory action research. Bangkok: CAP-Thailand Publication.

Prechanond, P., & Nualclai, A. (1997). Quality of Nursing Care in the Operating Room. Available form: http://www.mahidol.ac.th.

Poonsombat, N., & (et al.). (1993). The effects of systematic advice provision on anxiety level in pre and postoperative patients of Kalasin Hospital. Research Project.

Potter,P.A., & Perry, A.G. (1985). Fundamental of Nursing: Concept Process and Practice. St.Louis: Mosby.

Puttarungsri, S. (1999). Proactive roles of operating room nurses. The 4th Academic Conference of Thailand Operating Room Nurses Association, (July) : 41-47.

Rain, J.W., & Ray, D.W. (1995). Participatory action research for community health promotion. Public Health Nursing 12 (4) : 256-261.

Robinson, A. (1999). Aged Care Linkages Participatory Action Research Rural Health Care. Australian Journal of Rural Health 7(3) : 172-180.

Roll, S. K., & Hughes, I. (1998). Participatory Action Research: Getting the Job Done. Available from: Action Research Electronic Reader AROW home Role

Rothrock, J.C. (1996). Preoperative Nursing Care Planning (2nd ed.) St.Louis: Mosby year book Inc.

Sansiribhun, N. (1999). Pre-Caesarean Section Anxiety. Programs and Proceedings of World Conference on Surgical Patient Care: The Essence of Preoperative Care. Helsinki, Findland, (July) : 179-181.

Sherman, D.W. (1997). Developing quality assurance programs in ambulatory surgery. Nursing Management 28(9) : 45.

Snape, D. (2000). Concept of health and the health promoting role of the perioperative nurse. British Journal Perioperatuve Nursing 43-49.

Swan, B.A. (1994). A Collaborative Ambulatory Preoperative Evaluation Model. AORN Journal 59(2): 430-437.

Thailand Operating Room Nurses Association. (2001). Operative nursing standards. The 6th Academic Conference of Thailand Operating Room Nurses Association: Continuity of Quality (July) : 22-25

Uniphan, J. (1999). Proactive roles of operating room nurses. The 4th Academic Conference of Thailand Operating Room Nurses Association (July) : 20-36.

Widtfeldt, A.K. (1992). Quality and quality improvement in occupational health nursing. AAOHN Journal 40(7) : 326-332.

Whyte, W.F. (1991). Participatory Action Research. USA: Sage.