

CHAPTER 1

INTRODUCTION

Background and significance of research problem

Hand serves as a multifunctional organ in daily life. Most people consider hand as one of the most important parts of the body. It plays major role in almost everything we do in our daily living. As a consequence, it is susceptible to a wide range of injury. While using hands in working both indoor and outdoor, hands are at risk for injuries.

At present, as agroindustry and transportation have rapidly developed, the incidence of hand injury is increasing in many countries including China (Gu, 1995). Hand trauma accounts for a significant number of emergency departments in the United States (Bhende, Dandrea & Davis, 1993). Burcke, Dias, Lunn and Bradley (1991) reported 475 patients per 100,000 population presented with hand injuries each year in Scotland. Five percent among 47,603 patients who came to emergency department were hand injured patients (Huashan Hospital report, 1996). It was reported 15,282

patients presented with hand injury in outpatient department in 1997, There was increasing tendency comparing to the number of 12,964 in 1996 (Huashan Hospital report, 1997). There were 777 hand injured patients hospitalized in Huashan Hospital during 1996 for surgery (Huashan Hospital report, 1996). According to Huashan Hospital report during November 1996 to January 1997, 94 hand injured patients, 88 males and 6 females, were admitted for operation. For different age groups, 47 were between 20-30 years, 27 were between 31-40 years, 17 were between 41-50 years, and 3 were between over 51 years.

Hand injury includes finger(s) or hand fractures, amputation, glove laceration, grossly deformed, laceration of the forearm, hand burns, nerve injury, which occurs in any age throughout life span. They were more likely than other fracture patients to be male and between the ages of 10 to 40 years (Packer & Shaheen, 1993). According to Huashan Hospital report (1996), the majority of hand injury patients undergone operation was moderate to severe hand injury, which include laceration, nerve injury (brachial plexus root avulsion), thumb and index or multiple fingers amputated, or the hand amputated by machine, and grossly deformity form crush injury by heavy forces. Among those,

either moderate or severe hand injury can cause loss of skin, soft tissue, some segments of bone, and/or nerve. Changes in hand appearance and loss of function commonly occurred (Gu, 1995; Tang, 1994).

The technological advancement of hand surgery enable surgeon to completely revascularize of amputated digits and limbs, soft tissue replacement, finger and hand reconstruction, nerve repairment, digital transplantation (Tang, 1994). The goals of treatment of an injured hand are to minimize undesirable sequelae and preserve maximal function. Gu (1993) reported a success rate of 95.5% as the result of his study among 300 Chinese patients who had undergone the transplantation of toes to reconstruct thumbs and fingers. The survival rate in 272 thumb replantation was 93% (Tang, 1994). Although advance in techniques of hand surgery have enhanced viability of replanted parts, many problems still remain such as wound scars, inability to regain full sensory function, range of motor, and tendon adhesion after surgery. These may develop changes in hand appearance and function. Change in normal body structure can result in alteration of body image (Darling-Fisher, 1985).

Body image is a person's perception of his/her own body. It includes present and past perception as well as

feeling about size, function, appearance (Schilder, 1989). Another aspect of body image is the person's perception of other's reactions to his/her appearance (Gruendemann, 1975). Body image is the root of identity, self-esteem and self-worth, the bases from which man function. Changing in the structural function or appearance of the body requires modification of body image (Phipps, Cassmeyer, Sands & Lehman, 1995). Alterations of body image related to disability have been widely studied (Drench, 1994; Wassner, 1982; Zeldow & Pavlou, 1984). The study conducted by Anuroj (1992) revealed that there were some alterations of body image among 150 Thai amputees. A change in body structure that results in altered function and/or appearance is accompanied by an alteration in person's body image.

Acceptance of a change in body image is important for the person's adjustment to the body status change and to his ability to grow beyond it. Changing in body image may disrupt the usual life activities of the work and play. It may affect the relationship with resource persons or significant others, as well as with all other contacts. Changes in body image may alter social responses (Wassner, 1982). Carpenito (1997) suggested that when disturbance of body image occur, individual may reject treatment prescribed

and instruction. According to the researcher's experience, most of the hand injured patients expressed attempt to hide postoperative injured hand while being in public. Long treatment and recovery duration make patients become suspicious of the surgical results. Although early hand exercise after stitches off may prevent scar contracture and facilitate patients to restore the maximal sensory and motor functions as much as possible, some patients are unwilling to cooperate follow and the physician and nurses' suggestion. They feel uncertain whether their hand appearance and function will be restored. As a result of uncertainty, some patients even withdraw themselves from follow-up schedule (Honing & Kon, 1996). Patients perceive that their hand function and appearance are difference from previous. They may feel forever loss the sense of wholeness or the sense of being an intact person. They also concern about the other's reaction to their appearance. Mutilation of the hand has a great impact on the person's inner image (Honing & Kon, 1996). Thus, the patients having changes in hand appearance with or without loss of hand function may experience some degree of alteration of body image. It is the nurse's responsibility to be aware of the patient's perceptions of body changes and the influence on his daily

life with understanding of the hand injured patients' perception of their physical and psychological self, nurses can use it as a guideline to help them empowering in using their assets to become involved in activities of daily living. The nurses could also assist them to adapt to changes of their body image as well as encourage them to cooperate with the schedule effectively to reach the rehabilitative objective.

Since Shanghai is the biggest industrial city of China, there are increasing numbers of company especially automotive factory, for instance, automobile, textile, steel, and electrical product factories. The majority of workers in these factories are young and raw recruited. They are at high risk of having injury. According to Huashan Hospital report, the young male adult patients account for 74.3% among total hand injured patients during November 1, 1996 to January 31, 1997. At this age group, the patients are more concern with their hand appearance and function. The sequelae of hand injury has impacts not only on individual's self, but also on the family, productivity of the factory, and socioeconomics of the city since they have more responsibility than any other age groups do for the family and society. The young adults are expected to enter

new roles of responsibility at work, at home, and in society and also to develop values, attitudes, and interests in keeping with these roles (Murray & Zentner, 1993). Meanwhile, the treatment of hand injury will increase health care cost for the hospital and the country as well. Regain of hand function requires from 6-12 months to several years in some very severe hand injured patients. Some patients may undergo the operation only once or twice while the others require more times of reconstructive surgery. Those procedures cost a number and amount of time and money.

From reviewing literature, many studies on body image conducted by western researchers covered normal person to traumatic patients. However, the report on study of body image directly among hand injured patients was not found. There were few studies regarding the impact of hand injury on the individual's body image in China.

The purpose of this study was to identify body image among postoperative hand injured patients at Huashan Hospital in Shanghai, China. Information gained from this study would provide nurses an understanding of hand injured patients' perception and value placing on the altered hand appearance and function. The meaning of body image alteration could be used to provide holistic care and assist

the patients in maintaining personal worth and reestablishing a satisfactory body image.

Objective of the study

The objective of the study was to describe the body image among postoperative patients with hand injuries.

Definition of terms

Body image refers to a person's perception of his own body especially towards his hand appearance and function, and other's reaction to his hand appearance and function after receiving hand surgery. It can be measured by instrument developed by investigator based on reviewing literature with focus on Schilder's (1989) definition.

Hand injured patients refers to an individual having moderate to severe trauma on finger(s) and hands including thumb and multiple digital amputated, carpal and wrist fracture, skin and soft tissue cuff tear, tendon laceration,

nerve impairment. They affect hand appearance and function classified by score according to medical record.

Hand operation refers to type of operation include thumb and multiple digital replantation and reconstruction, soft tissue replacement, tendon repair, and nerve reconstruction.