CHAPTER 2

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Literature Review

For the purposes of this study, literature on self-concept of hospitalized school-age children with chronic illness was reviewed. Specifically, the area reviewed included (a) self-concept of school-age children, (b) chronic illness and children's self-concept, (c) hospitalization and children's self-concept, and (d) possible factors which may have influence on self-concept of chronically ill children.

Self-concept of School-age Children

Self-concept is a multifaceted, developmental, and differentiable terms of self perception that will become increasingly differentiated with the increase of age and experiences (Shavelson, 1976). The following section of literature review of self-concept composes of five parts: (a) definition of self-concept, (b) components of self-concept, (c) measurement of self-concept, (d) development of self-concept of school-age children, and (e) consequence of self-concept alteration.

Definition of Self-concept

Generally, self-concept is a composite image of what an individual think he is, what he thinks he can achieve, what he/she thinks others think of him, and what he would like to be. It is a dynamic and evaluative picture which each person develops in his transactions with his psychosocial environment and which he carries round with him on life time (Burns, 1979, pp 3.).

According to Carl Rogers' self theory (Rogers, 1951), self-concept is an organized configuration of perceptions of the self which is composed of such elements as the perceptions of one's characteristics and abilities, the perceptions and concepts of self in relation to others and to the environment, the value or qualities which are perceived as associated with experiences and objects, and goals and ideals which are perceived as having positive or negative valence.

A child's self-concept is a nucleus of his/her personality development, it includes what the child believes about himself or herself and the generalizations he or she makes about self-worth, abilities, and limitation, which is influenced by interactions with the environment and other persons and by perceptions of how others view you (Siemon, 1987).

Operationally, self-concept is defined by Piers and Harris (1964) as a description and evaluation of one's own

behavior and attributes that can be measured by 80 items of Piers-Harries Self-concept Scale (PHSCS). The scale includes six subconcepts: (a) social behavior, (b) academic achievement, (c) physical appearance and attributes, (d) anxiety, (e) popularity, and (f) happiness and satisfaction.

From these definition of self-concept, it can be conclude that, although these theorists differ in wording to describe self-concept, they all emphasis that self-concept is the interaction of self and psychosocial environment.

An individual's self-concept may be positive or negative. A positive self-concept implies acceptance of oneself as a person with strengths and weaknesses, while a negative self-concept is reflected in feelings of worthlessness and lack of self-respect (Beck, 1984). People with a positive self-concept have broad and diversified knowledge of the self, realistic expectations, and high self-esteem (Taylor, Littis & Lemone, 1993). Children with positive self-concept are more likely to experience success in academic competence than those with low self-concept, and a person's negative perception of self may be responsible of an undesirable lifestyle (Papenfuss et al, 1983).

Components of Self-concept

In general, self-concept is composed of two basic components, **body-image** and **self-esteem** (Burns, 1979; Crosby,

1982; Hymorich & Hagopian, 1992; McFarlane, et al, 1980; Whaley & Wong, 1991; Winkelstein, 1989). The two elements make up the child's individual, unique concept of himself which is influenced by interaction with the environment and other persons (Kim & Moritz, 1982).

Body-image

Body-image is defined as the picture of one's own body formed in his mind, which is influenced by sociocultural beliefs and values (Hymorich & Hagopian, 1992). Body image involves both physical appearance and items associated with the body. Body-image is a learned phenomenon, which is at least stable but can readily be altered as a result of illness, hospitalization, or surgery. (Fuller, 1990). Van der Velde (1985) stated that body image enable person to project how other see him/her by means of his/her appearances and action; enable person to selectively control the establishment and preservation of a desirable view of himself; and enable him to create within others impressions that do not precisely reflect his actual self.

In a study conducted by Folsom-Meek (1991) on the relationship of self-concept and physical attributes and fitness, 97 elementary school children in grade one to six were studied. Correlations were examined for significance and effect size among the attributes of age, weight, body mass

index, four score from the Health Related Physical Fitness Test, and the total score for the Martinek-Zaichkousky Self-concept Scale for children. Result indicated that attributes and physical fitness were the best predictors of self-concept score. Thus, physical appearance and attribute, which is one of the subconcept of self-concept proposed by Piers and Harris, reflects important part of one's self-concept, that is body-image.

In another study, Folk, Pederson, and Cullari (1993) investigated body satisfaction and self-concept of 45 third-grade and 57 sixth- grade students, they found that for sixth grade boys and both grade girls, self-concepts were positively correlated with body satisfaction. Therefore, body image, specifically physical appearance and attributes, is fundamental dynamism in the development of one's self-concept (Van der velde, 1985).

Self-esteem

Self-esteem, another component of the self-concept, is defined as a personal, subjective judgement of one's worthiness derived from and influenced by the social groups in the immediate environment and the individual's perceptions of how he or she is valued by others (Whaley & Wong, 1991). Hayes & Fors (1990) summarized that self-esteem can be changed because it is a learned concept, and can be enhanced through

positive school educational experiences. Further, enhancement of self-esteem is associated positively with improvement of academic performance, positive self-adjustment, great social effectiveness, acceptance of others, and sense of self-satisfaction and competence. Development of self-esteem emerges when children first enter school and fluctuates as children face stress, fear, and competition throughout the school year (Shavelson, Hubner & Starton, 1976).

The development of self-concept and self-esteem in school-age children within school setting was investigated by Larned and Muller (1979). The developmental changes in positiveness of self-concept and self-esteem in grades 1 to 9 were assessed in four area: physical maturity, peer relationships, academic performance, and school adaptiveness. One thousand four hundred and seventy one children's self-concept and self-esteem were measured with Self-descriptive Inventory. The findings revealed that the positiveness of self-concept and self-esteem as related to physical maturity showed gradual increase from grade 2 through 8. The positiveness of self-concept and self-esteem in peer relationships remained relatively stable from grade 1 to 9. The correlations between academic competence and self-concept, self-esteem, and school adaptiveness were statistically significant. Therefore, academic competence and peer-relationship, specifically, academic competence and popularity

proposed by Piers and Harris, are aspects which can reflect children's self-esteem.

In Lamarin's study (1987), while 291 children's self-esteem were measured by Dielman's Children's Self-esteem (CSE) Inventory, the result indicated that a significant relationship was found between self-esteem and positive attitudes towards health. Self-satisfaction is another aspect reflecting self-esteem.

Moreover, DuBois, Felner, Sherman and Bull (1994) conducted a study to test a model in which self-esteem mediated the relationship between social-environmental experiences and emotional/behavioral problems of 215 adolescents (Grades 7-9). The hypothesized model provided a reasonable good fit to the data. The result suggested that social-environmental experiences had significant effects on emotional problems via both direct and indirect effects that indicated a mediating role of self-esteem. Thus social-environmental experience, specifically, social behavior, is also reflection of self-esteem.

Situations which threaten maintenance of age-appropriate skills, competition, and behavior contribute to change of self-esteem. For ill children with poor self-esteem, they may suffer serious psychological problems such as anxiety (Dubois et al, 1994; Engstrom, 1992) and other negative emotional response (Mullis, 1992). Therefore these

negative emotional response such as anxiety is a reflection of poor self-esteem.

In short, self-esteem is the evaluation of one's worth in relation to one's ideal and the competence of others (Meisenhelder, 1985), it is associated with academic competence, self-satisfaction, social-environmental experience (social behavior), peer-relationship and acceptance of others (popularity), and negative emotional responses such as anxiety.

In summary of self-concept component, it can concluded that, self-concept consists of two major components, body image and self-esteem, which can be reflected by six subconcepts of Pier-Harris Self-concept Scale (PHSCS) including social behavior, academic competence, physical appearance and attribute, anxiety, popularity, and happiness and satisfaction.

Measurement of Self-concept

Several instruments have been reported to be used to measure self-concept of children. These instruments including Piers and Harris Self-concept Scale which measure general self-concept of children between ages of 6 to 16 (Piers & Harris, 1964), Sears' Self-concept Inventory which contains 48 items to evaluate changes of self-concept resulting from intervention programs (Sears 1963, cited in Shavelson 1976),

Coopersmith's Self-esteem Inventory which contains four subscales as general self, social self-peers, home parents, and school academic (Coopersmith 1967, cited in Wylie, 1974), Rosenberg's self-esteem Scale which assess unidemensional global self-regard (Rosenberg 1965, cited in Wylie, 1974), and Michigan State self-concept of Ability Scale which examine relationships between self-concept and consequent variables, such as intelligence, school achievement, and perceptions of the evaluations of significant others (Brookover 1972, cite in Shevelson 1976) et al. Among all the instruments of children's self-concept measurement, Piers and Harris Self-concept Scale had better reliability and validity, and items structure and wording are commendably simple (Wylie, 1974), thus it was widely used by many researches (Kimm, 1991; Kumer, 1976; Miller, 1987; Moffatt. 1987; Molla, 1981; Regan. 1993; Saucier 1984; Stumpf, 1989).

Development of Self-concept of School-age Children

A person is not born with a self-concept, rather, it is a social creation that develops as a result of interactions with others. Firstly, an infant learns that the physical self is different from the environment; if basic needs are met and warmth and affection are experienced, the child begins life with positive feeling about self. Next, the child internalizes other people's attitudes toward self. Parents

play the most influential role, peers play the second most influenced role. Then, the child internalizes the standards of society (Taylor, Lillis & Lemone, 1993).

The self-concept of a child appears to develop with development of one's body awareness and body image, language, and feedback from significant others (Zhu, 1980). Moreover, meeting needs of self-esteem is the center of self-concept development (Li, 1993). Thus, development of self-concept is organized in terms of personal constructs about reality that are generated by the particular social and non-social contents of repeated daily experience (Burns, 1979).

Throughout childhood and into adolescence, a child's self-concept is influenced and developed through interaction with the social environment and by feedback from parents, teachers, role models, peers, and friends (Meisenhelder, 1985). Improvements in self-concept can result in commensurate improvement in school competence and overall health (Winkelstein, 1988).

School-age contributes greatly to children's sociocultural achievement and self-concept development (Whaley & Wong, 1994). Over the elementary years, the child's self-concept gradually becomes more abstract, more complex, more elaborated, less and less focused on external characteristics and more and more on internal qualities. His/her self-

descriptions begin to be significantly more comparative (Crosby, 1992).

Consequence of Self-concept Alteration

Some of the life stressors may call forth a personal response and mobilize an individual's talents that results in good feelings about oneself. Meanwhile, stressors may also evoke maladaptive responses that diminish self-concept of a child. Those responses include withdrawal, depression, extreme anxiety which handled by the mechanisms of denial, aggression, irritation, isolation, and regression (Isaace & McElroy, 1980; Turner-Henson, 1994).

Papenfuss et al, (1983) conducted a project of "teaching positive self-concept in the classroom" on 118 elementary school students (58 in experimental group, and 60 in control group), a positive significant improvement of self-concept was obtained after the project. The benefits of this improved self-concept were the enhancement of school performance assessed by both teachers and students themselves.

On the other hand, Folsom-Meek's study (1984) on relationships among attributes, physical fitness, and self-concept development of 97 elementary school children indicated that attribute (include age, weight, body mass index) and physical fitness were the best predictors of self-concept

scores. Alteration of self-concept may result in changing of physical fitness.

Molla (1981)'s study on self-concept in 45 children with and without physical disabilities indicated that those physical disabilities children with low self-concept score had negative social behaviors, poor academic performance, and less happiness and satisfaction; these children used denial to defend oneself against facing stress.

On Goertzel's study (1991), 38 pediatric cancer patients were studied, children with negative self-concept were reported to have feelings of hopefulness and anxiety.

Nelms's study (1989) also reveals that school-age ill children had low self-concept than school-age healthy children. The ill children had significant higher levels of emotional responses and behaviors as empathy, aggression, and depression than healthy children.

Therefore, improvement of children's self-concept can result in enhancing of school performance and positive social behaviors, while decrease of self-concept may result in poor school performance, negative psychologic responses and social behaviors, and eventually, a life-long consequence may suffer.

Chronic illness and Children's Self-concept

Chronic illness refers to illness which interferes with a child's usual activities on a daily basis for at least

three months a year, leads to a hospital stay involving at least one month a year (Pless, 1975). Usually, these chronically ill children may suffer alienation, depression, loneliness, and fear which can be handled by the mechanisms of denial, aggression, irritation, isolation, and regression that impede the process of treatment and restore (Turner-Henson, 1994). These children find themselves isolated from typical childhood milieu and deficient in age-appropriate social skills. They believe that chronic illness is something to be ashamed of, because it is a punishment for bad behavior, therefore, they feel less than whole as a consequence of being ill (Peters, 1978; Taulor, 1986).

An increasing amount of researches has been conducted to investigate both self-concept and two components of self-concept (self-esteem and body image) of chronically ill children. Many of these studies use PHSCS to measure children's self-concept and its subconcepts.

Kumar et al (1976) studied the psychologic effect of sickle cell anemia on the self-concept and anxiety level of school-age children, 55 children (29 in patient group, 26 in healthy group) were interviewed using the PHSCS. Result indicated that the mean score of self-concept of patient-group was significantly lower than that of the healthy group. Children with sickle cell anemia has negative self-concept in this study.

Molla (1981) conducted a study to explore the self-concept in 45 children with and without physical disabilities, measured by the PHSCS, the result indicated that illness children had low self-concept score, and they obtained a significant low score on three subconcepts including social behavior, academic competence, and happiness and satisfaction; however, no significant difference were found between the scores on physical appearance and attributes, anxiety, and popularity subconcepts. He explained the result that the physical disabilities group used denial to defend oneself against facing stress, thus scores of these three subconcepts were inflated.

Miller (1987) conducted a study to explore the self-concept and participation in self-care among 50 school-age children with diabetic mellitus. Self-concept was measured by the PHSCS. A significant relationship between self-concept and self-care was reported, significant relationships of self-concept and self-care to duration of illness, willingness to participate in self-care, and academic achievement were also revealed.

In another study, Youssef (1988) investigated school adjustment and self-esteem of school-age children and adolescents with varying degrees of severity of congenital heart disease. School adjustment was inferred from IQ, school achievement, GPA, and social competence and behavior. Forty-

eight children with mild, moderate, and severe congenital heart disease (16 children in each group) and their mothers and teachers participated in the study. Subjects' self-esteem was measured by Coopsmith's Self-esteem Inventory (SEI) (Coopsmith 1967, cited in Wylies, 1974). Self-esteem was found to be positively correlated with IQ, school achievement, scholastic grade average, and social competence. This study indicated that children with congenital heart disease with the added burdens of below average IQ and low self-esteem were at particular risk for poor school adjustment.

For children with renal insufficiency, Crittenden & Holaday (1989) conducted a study among 20 children between the age of 2 to 10 years to explore the relationship between psychosocial attribute (including body-image) associated with physical growth and behavioral adaptation. Children's psychosocial attribute was measured by Illinois Test of Psycholinguistic Ability, behavioral adaptation was assessed by Laborsky Social Attitude Scale through their parents' statement. Result indicated that negative behavior ratings tended to lower for children with high psycholinguistic ability (high body-image). Thus they adapted better than those who have poor body-image.

Using the PHSCS, Kimm, Sweeney, and Janosky (1991) conducted a descriptive study on the self-concept of 130 obese children. They found different scores between boys and girls

in self-concept scores of obese children. Certain subconcepts scores of obese children are low compared with healthy children, especially in anxiety and popularity subconcepts.

Leukemia children's self-esteem was studied by Mullis (1992). Self-esteem was measured by Coopersmith's SEI. The findings indicated that 13 school-age leukemia children had low self-esteem score than 50 healthy children; however, the difference was not significant when comparison of each subscale was done. One subscale relating to academic competence was found to be significantly different, the results suggested that poor academic competence contributed to children's low self-esteem. This study also supported the need to assist children with chronic illness to make the transition to school after their diagnosis and subsequent hospital visits.

In summary, chronic illness interferes with the process of children's development of positive self-esteem, body-image, some subconcepts of self-concept are involved, and eventually self-concept.

Hospitalization and Children's Self-concept

Frequent hospitalizations and medical treatments usually make the school-age child worry about changing in physical appearance, losing of friends, delaying of learning, and decreasing in level of academic achievement (Futcher,

1988). Hospitalized children identified themselves as powerlessness (Lincoln, 1978), less than whole as a consequence of being ill (Taulor, 1986), and they relied heavily on using of fantasy to reduce tension, to resolve conflict and to fill gaps in their understanding of reality (Peters, 1978).

Lincoln (1978) reviewed the literature regarding effects of hospital procedures and illness on children's body-image and self-concept. He concluded that treatment, illness and hospitalization were conditions that alter one's body-image and body-boundary. In addition, pain, surgery, and immobilization due to illness produced changes in one's body-image.

Riffee (1981) studied the self-esteem change in hospitalized school-age children use Coopersmith's SEI. The analysis of variance for the total self-esteem change score yielded a significant differences among 26 surgery subjects, 25 nonsugery hospitalized subjects, and 28 unhospitalized subjects. The findings also indicated that school achievement was a factor essential to the maintenance of a positive self-esteem in school-age children, and threats to self-esteem posed by hospitalization and surgery could be a potential precipitating factor of psychological and behavioral upset in school-age children.

Children who stay in hospital for longer time have

more negative self perceptions and emotional response. In a study of Ritchie et al (1984) on 10 long-stay chronically illness children, 32 short-stay chronically illness children, and 20 acute illness children. the children in long-stay chronic illness group expressed more concern relating to intrusion (23%) than children in short-stay chronic illness group (13%), and acute illness group (7%). These concerns and fears parallel the child's misconceptions about body, body function, and body integrity.

Using a projectile technique, Scavnicky-Mylant (1987) studied 30 hospitalized school-age children's capacity for an appraisal of threat. The hospital situations (such as blood test, doctor and nurse round, and x-ray examination) evoked a majority of negative facial expression and negative verbalization. The result indicated that their inability to adequately assess threat in a situation had resulted in a higher level of anxiety and influenced negative verbal response.

Therefore, hospitalization is an event that ill children face stresses of self-esteem, and body image impaired, and finally, self-concept impaired.

Possible Factors which may Influence Self-concept of Chronically Ill Children

The following part of literature review was concerned

with possible factors related to self-concept of chronically ill children. Based on the previous literature review, these possible factors include age, sex, academic achievement, type of chronic illness, duration of illness, and frequency of hospitalization etc.

Age and Sex

From a developmental viewpoint, it is expected that self-concept may change with age (Fuller & Schallar-Ayers, 1990). In general, the younger the child, the less likely that serious maladjustment will be found, and the greater the opportunity for adaptive mechanisms to come into play.

Among all the studies on children's self-concept, the one conducted by Piers and Harris's (1964) is considered to be the most comprehensive in this field, which suggested that age is an obvious correlates of children's self-concept. PHSCS was first developed in this study. 363 subjects' self-concept were predicated (119 children in third grade, 127 in six grade, 117 in tenth grade), sex appears in subconcept (for example: anxiety) different significantly. Burns & Zweric's study (1980) of self-concept of chronically ill children also showed age and sex difference on self-concept measurement. Kimm et al (1991) reported a sex difference in subconcepts as anxiety and popularity of the PHSCS in obese children. Mullis's study (1992) on self-esteem and self-image of

leukemia children indicated that self-esteem score for children with leukemia and healthy children increased on the average of 3.40 points with each year of a child's age; boys with leukemia have high self-image than girls. However, Saucier (1984), Molla (1981), and Kumar et al (1976) found no significant different of age and sex on children's self-concept assessed by the PHSCS. Therefore, self-concept may change with age. Sex is correlated with self-concept in some subconcepts.

Academic Achievement

Academic achievement appears to play an important role in the development of positive self-concept of school-age children by improving self-confidence and self-esteem (Hayes & fors, 1990; Pier and Harris, 1964; Riffee, 1981). The relationship between children's self-concept and academic achievement was found to be significant by Piers and Harris (1964) on 363 school-age children. The correlation between self-concept, and academic achievement were greater at the sixth grade group than third grade.

Riffee's study (1981) on hospitalized school-age children also supported the view that one factor essential to maintain positive self-esteem in school-age children was school achievement. Miller (1987) studied 50 school-age diabetic children, he found a significant positive

relationship between self-concept and academic achievement. For school-age children with leukemia, Mullis (1992) reported that they had lower self-esteem scores due to school and academic competence. Thus, academic achievement is proposed to be one important factor influencing self-concept of school-age ill children.

Type of Chronic Illness

Chronic illness has definite implication on children's development, the manner and extent it may modify typical developmental process depend on characteristics of the illness, such as the severity of illness, its expected prognosis, necessity for physical care, degree of visibility, pattern of symptom presentation, and degree of function impaired. Children with some type of chronic illness may experience discrimination because of the physical appearance change or physical disability (Turner-Henson, 1994). For example, children with serious congenital heart disease are considered as "special" because of their slim and small figure, clubbing fingers, and inhibition of daily activities (Youssef, 1988). In addition, children with different types of chronic illness may receive different treatment, for example, leukemia patients receive chemotherapy or radiotherapy, nephrotic syndrome patients take medications as prednisolone, or endoxan (CTX) for long time. The change of

physical appearance due to side effects of treatment such as loss of hair, Cushing's face contribute to their poor body-image and low self-esteem.

In Zeltzer's study (1980) of 345 healthy adolescents and 168 adolescents with different type of chronic illness (Cancer, diabetic mellitus, cardiac, renal, rheumatologic disease), a different perception of psychologic impact were found; adolescents who perceived their chronic illness as having a significant impact on themselves has a lower body-image than those who perceived minimal impact.

In another study, Engstrom (1992) found that low self-esteem, anxiety, and depression were more common in 48 children with inflammatory bowel disease than those in matched comparison group with tension headache and diabetes as well as in healthy children. However, many children denied their problems. This may due to type of chronic illness, its special consequence, and the embarrassment experienced by the children.

Turner-Henson (1994) also suggested that for children with different types of chronic illness, more discrimination was reported in children with activity-limiting problem, and in children with visible handicapping chronic illness, but for children with asthma, there were fewer reports of discrimination. Therefore, type of chronic illness may have some correlates with chronically ill children's self-concept.

Duration of Illness

The implications of chronic illness on children's self-concept development differ considerably depending on the child's age of its onset and age of the child at time of assessment. Pless (1984) indicated that children with diseases that begin at birth adjust more readily than those whose onset is at a more developmentally critical or sensitive time, moreover, those whose disease begins around school entry are likely to be especially vulnerable. Usually, children with chronic disease, specifically leukemia, nephrotic syndrome, and congenital heart disease have a long duration of illness. Because school-age is an important period of self-concept development, if the onset of illness is around this period of time, the changed physical appearance or impaired physical abilities, discrimination of peers and school, along with the effects of treatment procedure are all threats on their self-concept development.

In one study, Miller (1987) revealed a statistically significant relationship between self-concept and duration of illness, age of diagnosis after the study of school-age diabetic children. For those children whose first diagnosis were during their preschool and school age, the longer the duration of illness, the lower self-concept they had. Therefore, duration of illness is one possible factor related

to chronically ill children's self-concept.

Frequency of Hospitalization

Generally, children with nephrotic syndrome, leukemia, and congenital heart disease have frequent hospitalization. Especially in China, hospital is the main place for these chronically ill children to get fully care and treatment on their onset times. Thus most of them have more frequent hospitalization.

Self-concept development of these hospitalized children is affected by problems such as isolation from family, school, and friends, discrimination because of physical disabilities, and physical appearance changing due to side effects of treatment (Goertzel & Giertzek, 1991; Turner-Henson, 1994). A child's frequency of hospitalization will determine how anxious he is and the type of stress response, therefore, how he perceives himself (McFarlance et al, 1980). Frequent hospitalization of chronically ill children may make them social isolated and loss of self-esteem (Futcher 1988, Yoos 1987).

Summary of Literature Review

To summarize, self-concept a description and evaluation of one's own behavior and attributes which composed of body-image and self-esteem. Self-concept can be

operationally measured by 80 items of Piers-Harries Self-concept Scale which includes six subconcepts: (a) social behavior, (b) academic competence, (c) physical appearance and attributes, (d) anxiety, (e) popularity, and (f) happiness and satisfaction. Most studies in the field of self-concept of hospitalized chronically ill children reached the same basic conclusion: chronic illness interfere with children's psychological and emotional development. As a result, the process of developing positive self-concept is impeded more or less. Hospitalized chronically ill children have negative self-concept. Literature supports the notions that multiple factors may have some influence on chronically ill children's self-concept. These factors include age, sex, academic achievement, type of chronic illness, duration of illness, and frequency of hospitalization etc.

Conceptual Framework

Self-concept, as operationally defined by Piers and Harris (1964), can be assessed by six subconcepts: (a) social behavior, (b) academic competence, (c) physical appearance and attribute, (d) anxiety, (e) popularity, and (f) happiness and satisfaction.

A child interacts with and influences his or her environment, and the changed environment in turn influences the child and changes him or her. The spiral of mutually

effective interaction is what motivates continuous developmental growth. Variations in this developmental process occur because of variation in the child, the environment, or both (Perrin & Gerrity, 1984). For hospitalized chronically ill school-age children, hospital is a special environment for them. Illness, hospitalization, treatment, recurrent of disease, separation from family, and absence of school are events that may affect their development of positive self-concept at this special period of time. The illness affects the child's interactions with his or her physical and social environment, and aspects of his or her environment, such as parents, peers, or school system, are altered as a result of the illness. Each change in either child or environment ultimately contributes to changes in the other and in the entire social system of this child.

Based on the reviewed literature, it can be proposed that, self-concept and its subconcepts of hospitalized chronically ill children may be influenced by age, sex, academic achievement, type of chronic illness, duration of illness, and frequency of hospitalization. The conceptual Framework of self-concept of Chinese chronically ill school-age children is shown in figure 1:

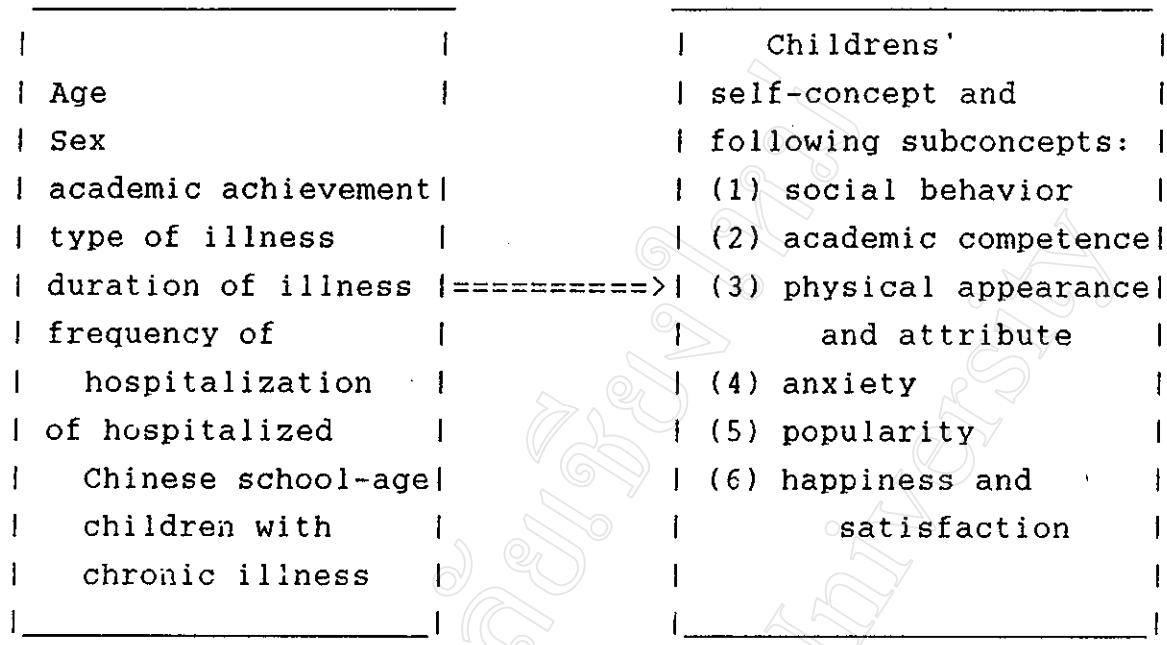

Figure 1 Conceptual Framework on Self-concept and Influencing Factors on Hospitalizated Chinese School-age Children with Chronic Illness