CHAPTER 2

LITERATURE REVIEW AND CONCEPTUAL/THEORETICAL FRAMEWORK

Literature Review and Related Researches

The following literature review will cover childhood fear, child's medical fear, and selected factors associated with medical fear.

Childhood Fear

Examination of childhood fear as a topic of extensive research emerged in the 1930's (Croake & Hinkle, 1976). Fear comes from old English, meaning sudden danger (Donald & Goodwin, 1983). According to Doland and Goodwin (1983), fear refers to fright where fright is justified. It is a warning sign that a threat or danger is near (Davis & Janosik, 1991). Fear is a feeling associated with expectancy of unpleasantness (Mckeachie & Doyle, 1970). Fear belongs to a definable situation; it is very similar to all people (Sullivan, 1954, cited in Kirkham & Kashka, 1988). Beck (1985) views fear as a cognitive process; it involves the intellectual appraisal of a threatening stimulus. Sawry and Telfer (1971) view fear as a response to a painful stimuli; so the origin of fear is painful stimuli and fear can be conditioned to various stimuli. Kaplan, Sadock, and Grebb

(1995) defined fear as the emotional response to a consciously recognized and usually external threat of danger. Fear is colored by acute and definitive origins (Kaplan, Sadock, & Grebb, 1995).

Fear can be aroused by external and readily determined origin (Kaplan, Sadock, & Grebb, 1995; Kashani et al, 1981, cited in Davis & Janosik, 1991). Causal factors linked to fearfulness in children include (Kashani, et al, 1981, cited in Davis & Janosik, 1991):

1.1. Unusual constitutional sensitivity to fear producing stimuli;

1.2. Undermining of feelings of adequacy and security by an early trauma, such as accident, illness, or loss;

1.3. Exposure to unfamiliar surroundings such as a hospital or a new school;

1.4. Excessive warnings of the dangers of the world communicated to the child;

1.5. Repeated experiences with failure, reinforcing the child's feelings of inadequacy and inability to cope;

1.6. Inadequate interpersonal relationships extending beyond the family.

After literature review, Hetherington and Parke (1986) summarized that there are three viewpoints to explain the acquisition of childhood fear. As for the first viewpoint,

'fear is innate', is genetically determined (Ainsworth & Dennis, 1940, Freedman, 1974, Plomin, & DeFries, 1985, all cited in Hetherington & Parke, 1986), such as the fear of pain, darkness, strangers, dead or mutilated bodies, snakes, dark woods, heights, being looked at, novelty. The second viewpoint, 'fear is not innate or genetically determined'; rather, children learn to fear certain aspects of their environment through conditioning, observation, modeling and imitation (Vein & Short, 1973, cited in Hetherington & Parke, 1986). For example, the young child who touches a hot stove, the consequence of touching the stove is pain, and as a result of this unpleasant outcome the child learns to fear the hot stove and avoids it on later occasions. The third viewpoint, 'fear possesses cognitive basis', which means that fear can be understood as a perceptual-recognised achievement (Hebb, 1946, and Schaffer, 1966, cited in Hetherington & Parke, 1986). For example, through perception, the infant establish a familiar pattern of mother, and the perceived difference between mother and strangers can produce fear to the strangers. From above, it is evident that no single viewpoint can explain the acquisition of childhood fear completely.

Childhood fear has been well documented and categorized diversely. They mainly include political fear (Miller, 1979); supernatural fear (Croake, 1973, cited in Astin, 1977); ecological fear (Croake, 1973, cited in Astin,

1977); medical fear (Ollendick, 1983, cited in Dong, Yang, & Ollendick, 1994); fear of home (Croake, 1973, cited in Astin, 1977); fear of animals (Croake, 1973, cited in Astin, 1977; Miller, 1979; Ollendick, 1983, cited in Dong, Yang, & Ollendick, 1994); fear of personal relations (Croake, 1973, cited in Astin, 1977); fear of danger and death (Ollendick, 1983, cited in Dong, Yang, & Ollendick, 1994); fear of natural phenomena (Croake, 1973, cited in Astin, 1977); fear of school (Croake, 1973, cited in Astin, 1977). Broome, Hellier, Wilson, Dale, and Glanville (1988) considered political fear, supernatural fear, fear of home, and personal fear as general fear. Childhood fear shifts with developmental stages (Hertherington & Parke, 1986). For school-age children, due to their perceptual and cognitive development, their fear becomes better articulated, more varied, and more realistic with maturation (Miller, 1979). Miller (1979) concluded that between seven to 12 years of age, children become less afraid of the dark, supernatural i.e., ghosts and spooks and animals and more afraid of bodily injury, death, school and injury or death of relatives.

Factors associated with childhood fear

From the literature review, Miller (1979) suggested that age, sex, social class, culture, mass media and family or parent variables may influence the childhood fear. She found that a number of studies have indicated that fear changes with developmental stage and girls report more fear than boys (Miller, 1979). Miller (1979) also concluded that upper socioeconomic class children have been reported to have fewer fears and different fears than lower socioeconomic class children. Parent and family variables including the quality of maternal attachment, family experiences, maternal traits, and parental behavior are associated with child's fearfulness (Miller, 1979; Yanni, 1982). In the Chinese population, the child's fear are influenced by the child's age and sex as well (Dong, Yang, & Ollendick, 1994; Dong, Xia, Lin, Yang, & Ollendick, 1995; Yang, Ollendick, Dong, Xia, & Lin, 1995).

In summary to this part, fear is an emotional response to a threat that is external and definite. Fear can be aroused by many causes, but there is lack of explanation concerning how it is developed in children. Childhood fear varies and is probably influenced by the child's age, sex, social class, culture, mass media and other family or parent variables. For school-age children, regarding perceptual and cognitive development, their fear becomes better articulated, more varied, and more realistic. Bodily injury, death, school, and

injury or death of relatives are the major agents of fear for school-age children.

Child's Medical Fear

The study of medical fear only began at 1970's and there is little research about it (Hart & Bossert, 1994). Medical fear has been defined as fear arising from any experience that involves medical personnel or procedures involved in the process of evaluating or modifying health status in health care settings (Steward, 1981, cited in Broome, Hellier, Wilson, Dale, & Glanville, 1988).

Hospitalization is generally regarded as a stressful and threatening experience. It fortifies not only children's general fear but also much more medical fear (Broome, Hellier, Wilson, Dale, & Glanville, 1988; Levine, Carey, Croaker, & Gross, 1983; Betz, Hunsberger, & Wright, 1994). Vinsingtainer and Wolfer (1975) described medical fear for pediatric surgical patients as follows: fear of physical harm, such as pain, mutilation, or death; separation from trusted adults, such as parents; the unknown; uncertainty about 'acceptable' behavior; loss of control and independence. Zurlinder (cited in Smith, 1991) also described the medical fear of hospitalized children in similar terms to Vinsintainer and Wolfer's description (1975), including: harm or injury; separation from significant others and usual routines; unknown

environment and personnel; unclear limits and role expectations; loss of control and disability. Broome, Hellier, Wilson, Dale, and Glanville (1988) explored the child's medical fear by interviewing 146 school-age children and categorized it as environmental, procedural, intrapersonal, and interpersonal fear. From the empirical source, they developed Child Medical Fear Scale (CMFS). Generally, the four themes are interrelated and can intensify each other.

1. Environmental Fear

Environmental fear is fear of the hospital environment (Broome, 1992). The hospital is a complex social unit organized to function efficiently and oriented to group, rather than individual needs (Goffman, 1972, cited in Poster, 1983). Children are unfamiliar any social unit other than the family, so hospital is threatening to them (Kashani, et al, 1981, cited in Davis and Janosik, 1991).

Moreover, hospital is particularly threatening and preoccupation with violence and death is more common in children than is generally recognized. The child can not select to come to a hospital; he is brought to it by adults. It therefore presents a prison, a place where one is confined for punishment, as a result of this misconception dangers and fear can be reinforced (Erickson, 1972). The hospital, has an unhappy appearance and unfamiliar equipment the child may

consider equipment as weapons and evoke a fear of them (Erickson, 1972; Smith, Goodman, Ramsey, & Pasternack, 1982). Isolation strengthens this threat further (Erickson, 1972).

The temporary and sensory stimuli are also origins of fear, for example, the unhappy noise, smell, sight (Kashani, 1981, cited in Davis & Janosik, 1991; Mckeachie & Doyle, 1970). What happens to other children in the ward (e.g., death, painful reaction to procedure) also shapes their fear (Erickson, 1972; Hetherington & Parke, 1986).

Because of the nature of the patient's role, choices regarding when and how their personal needs are met are limited and the many routine hospital activities usurp individual power, identity, and result in a loss of control (Poster, 1983; Wong & Wilson, 1995). Dependent activities such as enforced bedrest, use of a bedpan, inability to choose a menu, lack of privacy and depersonalization, needing help with a bed bath, or transportation by a wheelchair or stretcher further inhibits children's control (Lincoln, 1978; Poster, 1983). The perception of loss of control impedes children's feeling of vulnerability and is threatening (Wong & Wilson, 1995).

Hospitalized children have death intimidation because they are surrounded with various threatening dangers (Poster, 1983). The experience of surgery, withdrawal of blood, lumbar punctures, and other acts that hospitalized children perceive

as acts of violence may indeed precipitate fear of death (Poster, 1983). Broome, Hellier, Wilson, Dale, and Glanville (1988) regarded fear of death as environmental fear. But there is lack of agreement as to whether hospitalized children have fear of death or not (Poster, 1983).

2. Intrapersonal Fear

Intrapersonal fear are the fear of harm or bodily injury (Broome, 1992).

The fear of harm or bodily injury is generally recognized (Brennan, 1994; Wong & Wilson, 1995). Beyond early infoncy all children fear bodily injury possibly due to its association with mutilation, bodily intrusion, body image change, disability, or death (Brennan, 1994; Wong & Wilson, 1995).

The threat of bodily injury is from a great range of sources, such as the hospital environment, medical procedures and so on (Wong & Wilson, 1995). In addition, thoughts and actions can be imagined sources of bodily damage. For example, the young child may think that any violation of body surface may create a potential open channel, permitting either the loss of important inner matter or the entrance of dangerous external substances (Fassler & Wallage, 1982).

3. Procedural Fear

Procedural fear is fear of medical procedures. Pain and bodily injury are usually associated with medical procedures. Fear of pain and bodily injury is universal (Wong & Wilson, 1995).

The fear of medical procedures is generally recognized. While almost all hospital experiences cause some concern to the child one of the most fearful events is an injection (Brennan, 1994; Poster, 1983). Additionally, children also can be frightened by other common medical procedures, such as finger sticks, blood tests, spinal taps, and intravenous infusion (Poster, 1983). Lumbar puncture and bone marrow aspiration are definitely invasive and fearful (Broome, Lillis, MacGahee, & Bates, 1992). Cardiac catheterization has also been found to be fearful event to children and adolescents (Pederson, 1995).

4. Interpersonal Fear

Interpersonal fear is fear related to interaction with others (Broome, 1992).

On one hand, hospitalized children, may have fear of interacting with medical personnel (Broome, 1992). Firstly, the medical personnel may represent the stranger and children have fear of strangers (Hetherington & Parke, 1986). Secondly, in the child's mind the personnel are the performers of

painful, invasive procedures; holders of threatening equipment and the implementers of punishment. Naturally, the child can associates fear of environment, procedure and body injury to the personnel and therefore is afraid to interact with them (Hetherington & Parke, 1986). Thirdly the personnel a child meets in the hospital has authority. They set limits and role expectations to the child and every request presumes compliance, so it is difficult for the personnel to have intimate relationship with children, therefore the children may fear of them (Foster, Hunsberger, & Anderson, 1989). Fourthly, the child has a high sensitivity to personnel's activity and fear that their activity will bring some hurt or pain on them (Mazinski, 1992). Medical rounds, or the arrival of a doctor may alarm the child (Erickson, 1972). Furthermore, they usually cannot understand medical words and grasp incomplete information and use fantasies to find their own explanations. These fantasies can enforce the child's medical fear (Poster, 1983). For example, the injection of a dye prior to x-ray was fearful to a six-year-old, who cried and said "they are gonna 'die' in me" (Erickson, 1972).

On the other hand, pertaining to the specific role of hospitalized children, they possibly have a fear of interaction with families and peers (Broome, 1992). For example, they may consider themselves as "bad" objects who can contaminate illness to others through interaction. They also

probably fear whether they will be accepted by peers (Wong & Wilson, 1995).

Measurement of medical fear

There are a limited number of instruments that have been used to measure child's medical fear. The Medical Fear Subscale of the Fear Survey Schedule for Children (FFC-FC) contains eight items to evaluate the child's medical fear (Scherer & Nakamura, 1969, cited in Broome, Hellier, Wilson, Dale, & Glanville, 1988). The Hospital Fear Questionnaire (HFQ) is a scale containing eight items about child's stress to hospitalization (Meland, Meyer, Gee, & Soule, 1976, cited in Broome, Hellier, Wilson, Dale, & Glanville, 1988). The Hospital Fear Scale includes 25 items, eight items from the subscale of FFC-FC, eight for assessing hospital fear, and nine unrelated filler items (Meland, Meyer, Gee, & Soule, 1976, cited in Broome, Hellier, Wilson, Dale, & Glanville, 1988). Finally, the Child's Medical Fear Scale (CMFS). is a 17-item Likert scale which was revised from 29 items and includes four subscales: environmental, procedural, intrapersonal, and interpersonal fear. Among all the instruments, only CMFs has been developed and used with initial psychometric testing. Most of all, fear vs. anxiety and general fear vs. medical fear are cautiously differentiated in CMFS. It has been used in some studies and

indicated to be a reliable and valid instrument (Broome, & Hellier, 1987; Broome, Bates, Lillis, & McGahee, 1990; Broome, Lillis, McGahee, & Bates, 1992; Hart & Bossert, 1994).

Medical fear among hospitalized school-age children

According to Piaget (cited in Shaffer, 1985), six to 12 year olds are dominated by concrete operation. Operation means that the school-age children can think logically and systematically which was impossible in previous developmental stages. Concrete means that the thinking must be based on concrete informational input, they cannot think abstractly like adolescents. Thus, the school-age children have competent cognition, but not in full blossom. When they are sick and hospitalize, depending on their cognitive ability they explore the "white" world and obtain understanding. They observe other's activity and the hospital circumstances with big eyes and are able to comprehend a verbal explanation (Smith, Goodman, Ramsey, & Pasternack, 1982). In addition to their knowledge of potential beneficial and hazardous effects of any procedure, they are also aware of the significance of different illness, the indispensability of certain body parts, the meaning of death and the lifelong consequences of permanent injury or loss of function (Wong & Wilson, 1995). Thus, they seem to be able to discriminate actual dangers from imagined ones and their fear becomes more objective (Foster,

Hunsberger, & Anderson, 1989). Based on this knowledge they are capable of connecting the present situation with future outcomes. Children of this age focus on the physical consequence of illness (Wood, 1983) a major concern of hospitalized school-age children is their fear of not being well again (Foster, Hunsberger, & Anderson, 1989; Wong & Wilson, 1995). They may be less concerned with pain than with stability, uncertain recovery, or possible death (Wong & Wilson, 1995). Some cognitive developments of school-age children are incomplete so their understanding is limited. They have a vague idea of an illness as being within the body and begin to understand that illness results from external causes (Biface & Walsh, 1980). If they misunderstand something and use fantasies to figure out their own explanation (Foster, Hunsberger, & Anderson, 1989) as a result the misunderstanding and fantasies could become a fertile breeding ground for child's medical fear (Lambert, 1984).

According to Erickson (cited in Shaffer, 1985), the school-age children are in a period of industry versus inferiority. To establish their industry not only do they struggle for independence and productivity, but they also should accomplish the mission to go to school, master important social and academic skills, establish relationship with peers, compare self with peers and find social acceptance. Therefore, when they are hospitalized they may

react in the following ways. Firstly, due to their struggling for independence and productivity they become particularly vulnerable to events that may lessen their feeling of control and power, such as altered family roles, physical disability, the unknown, unclear limits and expectations, unfamiliar environment (Wong & Wilson, 1995). Additionally, owing to the mission they carry it is not surprising that school-age children become concerned with their body image and start to fear that he/she will not be able to compete or "fit in" with their classmates upon returning to school (Wong & Wilson, 1995).

From above, we can conclude the properties concerning medical fear among hospitalized school-age children from three perspectives. Firstly, they can learn what are actually invasive and threatening and what are not. Secondly they are concerned about the possible outcomes of illness, medical procedures and hospitalization and may fear them. Thirdly, developmental challenges increase their fear issues.

There are empirical studies showing the medical fear among hospitalized school-age children (Timmerman, 1983; Hart & Bossert, 1994). Timmerman (1983) explored the preoperative fear of school-age children by interviewing 16 children with age from 10 to 12 years old. The most commonly recalled categories of fear were loss of control (94 percent), the unknown (94 percent), injections (94 percent), and pain or

discomfort (88 percent). Only 13 percent of children recalled a fear of death. Forty-five percent reported a fear of destruction of bodily image.

Hart and Bossert (1994) identified the medical fear among 82 hospitalized children aged from eight to 11 years. The instrument used was the revised Child's Medical Fear Scale (Broome, 1992). The most fearful items were, separation from the family, having shots and their finger stuck, having to stay in hospital for a long time and being told that something was wrong with them. The least fearful items were going to the doctor's office, doctor putting a tongue blade in mouth, doctor or nurse looking down throat.

Examination of these two studies resulted in the identification of one similar theme related to medical fear among hospitalized school-age children. That was fear of intrusive procedures, primarily in the form of injection, or surgery.

In summary to this part, medical fear is fear of medical experiences, which is indeed crucial among hospitalized children. Medical fear includes procedural, environmental, intrapersonal, and interpersonal fear and can be measured by CMFS (Broome, Hellier, Wilson, Dale, & Glanvillie, 1988). The Medical fear displayed by hospitalized school-age children is also colored by their specific developmental stage and the most evident theme is medical procedures.

Factors Associated with Medical Fear in Children

Age

From the developmental viewpoint it is expected that fear may shift with age (Miller, 1979). In general, the younger the age, the more medical fear will be displayed (Miller, 1979). One study with indicated this view point was Dolgin, Phipps, Harow, & Zelter, 1990. In this study, among 61 chronically sick children, with ages ranging from five to 13 years, children's reports of medical fear was negatively related to children's age. The younger children had more medical fear than the older ones.

Contrary to this in Aho and Erickson's study, they found that first graders reported significantly less medical fear than the forth and seventh graders.

In three other studies, the relationship between the child's age and medical fear was not significant (Broome & Hellier, 1987; Hart & Bossert, 1994; Roberts, Wurtele, Boone, Ginther & Elkins, 1981).

Sex

Sex is another variable mentioned in the literature as possibly affecting children's fear. Girls tend to demonstrate more fear than boys (Miller, 1979). The effect of gender on medical fear has been identified in several studies (Aho & Erickson, 1985; Broome & Hellier, 1987; Dolgin, Phipps,

Harow, & Zelter, 1990). Whereas, in other studies, the influence of gender on medical fear was not significant (Hart & Bossert, 1994; Roberts, Wurtele, Boone, Ginther, & Elkins, 1981).

Type of illness

The nature of illness has been cited as a variable that may affect the child's reaction to hospitalization (Lambert, 1984). Acute and chronic illness represent two opposite kinds of disease and have a different nature. The duration of acute illness is less than three months, the duration of chronic illness is longer than three months and still requires a cure. Acute illness is characterized as sharp, short, and self-limited (cure or death), chronic illness is colored by long-term, progressive illness status (Ignatavicius, Workman, & Misher, 1995). Above all, chronic illness involves frequent hospitalization and prolonged medical experiences. Hence, this may have a different psychological impact on children and the resulted medical fear. However, in Hart and Bossert's (1994) study, among 84 school-age children, no matter if they had acute or chronic illness, their medical fear was not significantly different.

Living area of the family

Children's fear appears to be influenced by their background (Miller, 1979). In China, even though the difference of rural and urban life have lessened with economic stride, urban residuals remain on a higher socio-economic status than rural residuals. Upper-socioeconomic class children have been reported to have fewer fears and different fears than lower-socioeconomic class children (Miller, 1979). It is documented that the children whose family was in the lower income bracket had significantly more medical fear (Hart & Bossert, 1994). Meanwhile, almost all the urban children are only-children and nononlies most of rural children are in China (Chen, 1995). However not only-children one study, Strickland, Leeper, Jessee and Hudson (1989) revealed there was no significant difference in the report of medical fear between urban and rural children among a sample of 70 children with ages ranging from four-17 years.

In summary the results concerning factors which determine medical fear is rather inconclusive. Further studies to refine the findings are needed.

Conceptual Framework

Hospitalization brings the children into a stressful and threatening world, which results in medical fear. Medical fear is a kind of specific fear (Broome, Hellier, Wilson,

Dale, & Glanville, 1988). It is defined as fear arising from any experience that involves medical personnel, or procedures involved in the process of evaluation or modifying health status in health care settings (Steward & Steward, 1983, cited in Broome, Hellier, Wilsor, Dale, & Glanville, 1988). It can be measured with Child's Medical Fear Scale developed by Broome (1992), which includes four subscales: environmental, procedural, intrapersonal, and interpersonal fear. The amount of medical fear may be affected by some factors, including child's age, sex, type of illness, and area in which the family live.