FEARS OF SCHOOL-AGE CHILDREN DURING HOSPITALIZATION AND THEIR COPING STRATEGIES

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INTRODUCTION

The school-age years, from 6 to 12, are characterized by slow, steady physical growth and rapid social and cognitive development. During the school-age years, children gradually move away from home and parents as a primary source of support, and enter the wider world of peers and school. School-age children enjoy a variety of activities. Cooperative play and team sports are typical of this age group [(1)].

According to Erickson, the developmental task of this period is the development of a sense of industry. The child develops a conscience and internalizes cultural and social values. The child is able to understand and obey rules .Through social interactions; children begin to develop a sense of pride in their accomplishments and abilities. Children who are encouraged and commended by parents and teachers develop a feeling of competence and belief in their skills. Those who receive little or no encouragement from parents, teachers, or peers will doubt their ability to be successful [(1)].

According to Piaget [(2)], the age between 7 to 11 is considered as concrete operational thinking. It is the key feature of cognitive development in school age children. Children around the age of 7 become capable of mental operations in which they are able to combine, separate, and transform information in a logical manner. Increased memory ability allows children to hold two or more aspects of a problem in their minds while they are being processed. Physical maturation in the brain during childhood, experience and social transmission or what children learn from other people, and equilibrium are influencing factors of cognitive development so these may have an effect on their reactions[(2)].

School-age children may regress to earlier stages of development with a need for security objects. This regression may include physical resistance to treatments or procedures that are feared. Children may feel embarrassed about the return of these habits if they are discussed. If feeling out of control, school-age children may withdraw from caregivers, refuse to communicate and use television or sleep as a means of escape. School-age children actively seek and process information and accept support from others[(3- 5)].

As a child grows, different fears may be noticed at different times. Some are very specific to an age, such as fear of falling for the one year-old. A bad experience falling as the child begins to walk may affect future attempts to walk. Fears have a variety of symptoms, ranging from loud crying to nightmares to a withdrawal from certain activities. For example, bedtime fear might be apparent with an increase in nightmares. A fear of rejection might result in withdrawal from activities and people. Fears can be found at a variety of ages, including adulthood [(6)].

A two-year-old is better organized and more secure than an infant. A two-year-old may fear the dark, a bath, thunder and lightning, toilet training, loud noises, animals, doctors, strangers or separation. Three-year-olds may continue this list and add a fear of people or animals with an unusual appearance. Four-year-olds may add the fear of loss of a parent or loss of control. Between ages 4 and 5 years children are often unpredictable in their behavior, but 5 is not a real fear-filled age. At this age, children's fears become more concrete or real. They fear such things as bodily harm, falling, dogs, dark, death, and mom or dad not returning home [(6)].

The list of fears remains an important guide after age 5. The child now has a more concrete intellectual capacity. This means he can begin to determine what is real and what is not. When a child is young, it is important to lay the groundwork for responding to his fears in a positive, supporting manner. This positive and supportive approach will continue to help the child face many situations throughout his development. School-age children are beginning to realize that they can work through fears or learn to cope in positive ways. They recognize that they will outgrow them and that fears do not have to immobilize them. Call on child to use his strengths in order to deal with his fears. Once a child has this sense of mastery, he can recall it for assistance in mastering new territory [6].

Sources of fear for school- age children include societal change, school, competitive athletics, rushed schedules, and the media. Teaching children coping strategies can reduce the effects of fear. Fear is the state of being afraid of something to which someone can assess a value. In fear, the variables are fixed so that the object, person or situation can be appraised for the amount of possible harm they may cause. Then an appropriate plan may be established to combat the cause of the fear [7].

School age children with a high level of fear lose their ability to learn and perform goal- oriented behaviors. Fear can be manifested by behavioral problems such as agitation, avoidance of caregivers, active resistance, emotional distress, and regressive behavior. Physically, fear can also be manifested by increased systolic blood pressure, tachycardia, decrease physical activity, nausea, vomiting and increased pain perception [8,9].

Fear in medical settings is behaviorally defined as fear-related responses that originate in, or are expressed in medical settings [10]. It is a subjective feeling of tension, apprehension, nervousness, worry, and vigilance associated with increased autonomic nervous system activity [11].During the past 3 decades, researchers have confirmed that hospitalized children experience some degree of anxiety and fear [12-14].

Hospitalization can produce stress, anxiety and fear among pediatric patients irrespective of the reasons for hospitalization. Surgery can be both physically and psychologically threatening for school age [15]. The preoperative period is considered to be a stressful, fear -filled time. Hospitalized children often experience the highest anxiety prior to surgery which in turn can be a significant factor affecting recovery [16]. Hospitalization and surgery have many adverse psychological effects on school age children that may be prevented or minimized by psychological preoperative interventional procedures [17]. Depending upon their particular needs, children may receive preparation in either a group or an individual setting. During preparation sessions, a number of activities are held. Every child is offered a doctor's kit filled with a doctor's hat, mask, adhesive bandages, heart monitor pads, identification bracelet, crayons, and a program-specific coloring book. Children may receive a "surgidoll," a blank cloth doll that they can use to create a "patient." They are encouraged to act out their fears, expectations, and misconceptions on the dolls. Children are also given the opportunity to dress up as both the doctor and the patient [18].

Through medical play, children touch and see equipment that will be used on the day of surgery, such as the stethoscope and anesthesia mask. Picture books or videos may introduce them to other patients who have had similar types of surgery. Children leave their preoperative session with backpacks to bring to their surgery, which they are encouraged to use as transitional objects. Children can make an activity out of packing the

bag before they come to the hospital for the operation. Older children and adolescents receive age-appropriate psycho-education from the health care team, including viewing photographs of the operating room and hearing detailed explanations of the equipment they will see on the day of surgery. These activities are aimed at making the unfamiliar familiar and diminishing fears through play combined with developmentally suitable education [18].

Hospitalized school age children have to adapt to a new environment and physical changes brought on by hospitalization and treatment processes [9,19] .They also experience separation from their families and peer groups, pain, discomfort, and uncertainty of the outcome [20]. These stressors could cause emotional and cognitive regression and alter their ability to appraise threat [21]. A high level of anxiety and fear during hospitalization for surgery could be the end result of these stressors [22]. The literature on hospitalized children suggests a consensus among most authors that all school age children need some kind of psychological preparation for the hospital experience, particularly when accompanied by surgery [23].

School-age children utilize a variety of coping strategies when involved in a stressful situation to reduce their fears [24]. Coping strategies are intrapsychic processes or direct actions used to deal with a stressful situation and are usually distinguished as either problem or emotion-focused strategies .Problem focused coping strategies include efforts directed at solving the problem or doing something to alter the stressful event. The outcomes of coping are directly related to the problem- solving and emotional regulating functions of coping [25]. Outcomes of emotion- focused coping for an individual would be the level of emotion and morale experienced such as anxiety, fear, depression, self- esteem and life satisfaction. The extent to which an individual is able to resolve problems, attain goals or maintain usual life activities and social roles would be indicative of problem-solving coping. Physiological outcomes of coping are also recognized and include effects on health. Since coping is a dynamic process, assessment of both short and long- term outcomes are required [26].

Hence this study will be conducted to find out fears and coping strategies of hospitalized school-age children.

The Aim of this Study is:

To identify fears of school-age children during hospitalization and their coping strategies.

REVIEW OF LITERATURE

The conceptual framework underlying this study is derived from Piaget's cognitive developmental theory and Lazarus (1982) [27] model of stress and coping. The developmental stage of a child's cognitive abilities determines how the child perceives different situations, such as medical experiences. When the child reaches the age of about seven years, cognitive processes associated with the stage of concrete operations begin to develop. The child at this age will be able to appreciate more appropriately cause and effect relationships and be able to use logical reasoning. Because of logical reasoning, medical experiences may be perceived as a threat and illicit fear in the child [28, 29].

Fear is defined as a distressing emotion aroused by an impending pain, danger, or evil or by the illusion that these will occur .Medical fears have been defined as fears arising from any experience that involves medical personnel and/or procedures [30]. It is suggested that as children grow older, increased ego strength and cognitive abilities lead to greater maturity in perception of the environment [31].

The Lazarus model of stress and coping is based on empiric work with adults; however, the key concept of cognitive appraisal renders the theory relevant at any age. Researchers have used this theory to study children's coping strategies with stressful events [32-34].

Coping is defined as a process of constantly changing cognitive or behavioral efforts to manage specific internal and/or external demands [27].Coping involves efforts directed at changing the condition, thereby eliminating the threat (problem-focused) or interpreting the condition so that it is not perceived as a threat (emotion-focused). Studies of healthy children have indicated that school-age children are capable of reflecting and reporting their own coping behaviors and that they use a variety of cognitive and behavioral efforts to cope with stressors [34].

School Age Child Development:

School-age child development is a range from 6 to 12 years of age. During this period, observable differences in height, weight, and build of children may be prominent. The language skills of children continue to grow and many behavioral changes occur as they try to find their place among their peers. As always, safety is important in school age children and proper safety rules should be enforced in and out of the school area. School-age child development describes the expected physical, emotional, and mental abilities of children ages 6 - 12 years old [1].

- Physical Development :

School-age children typically have fairly smooth and strong motor skills. However, they vary widely in coordination (especially eye-hand), endurance, balance, and physical tolerance. Fine motor skills may also vary widely and influence a child's ability to write neatly, dress appropriately, and perform certain chores, such as making beds or doing dishes. There will be significant differences in height, weight, and build among children of this age range. It is important to remember that genetic background, as well as nutrition and exercise, may influence growth. A great deal of variance also occurs with the age at

which children begin to develop secondary sexual characteristics. For girls, secondary sex characteristics include breast development and underarm and pubic hair growth. For boys, they include growth of underarm, chest, and pubic hair, and growth of testicles and penis[1].

- Language development :

Early school-age children should be able to consistently use simple, but structurally complete, sentences that average five to seven words. As the child progresses through the elementary years, syntax and pronunciation become normal. Children use more complex sentences as they grow. Language delays may be due to hearing problems or intelligence deficits. In addition, children who are unable to express themselves adequately may be more prone to exhibiting aggressive behavior or temper tantrums. A six year-old child normally can follow a series of three commands in a row. By age 10, most children can follow five commands in a row. Children with a deficit in this area may try to cover it up with backtalk or clowning around and will rarely expose themselves to potential ridicule by asking for clarification [35].

- Behavior :

Frequent physical complaints (such as sore throats, tummy aches, and arm or leg pain) may simply be due to a child's enhanced body awareness. Although frequently no physical evidence for such complaints can be found, the complaints should be investigated, both to rule out substantial conditions, and to assure the child that the parent is concerned about the child's well-being. Peer acceptance becomes increasingly important during the school-age years. Behavior a child engages in to be part of "the group" may need to be negotiated with parents. This will allow the child to have some conformity and group-standing, without crossing the boundaries of the family's behavior standards. Friendships at this age tend to be primarily with members of the same sex [1, 35].

Lying, cheating, and stealing are all examples of behaviors that school-age children may "try on" in learning how to negotiate the expectations and rules placed on them by family, friends, school, and society. Such behaviors challenge parents to deal with the misdeed privately (avoiding peer ridicule), applying a punishment that is meaningfully related to the behavior, and modeling reparation and forgiveness. An ability to maintain attention is important for success both at school and at home. A 6-year-old should be able to focus on an appropriate task for at least 15 minutes. By age 9, a child should be able to focus attention for about an hour. It is important for the child to learn how to deal with failure or frustration without decreasing self-esteem or developing a sense of inferiority [35].

- Safety:

Safety is important for school-age children. School-age children are highly active and have a need for strenuous physical activity, peer approval, and increased daring and adventurous behaviors. Children should be taught to play sports in appropriate, safe, supervised areas, with proper equipment and rules. Bicycles and other types of recreational sports equipment should fit the child appropriately. They should be used only in accordance with generally recognized traffic and pedestrian rules, and with accompanying safety equipment such as knee, elbow, wrist pads/braces, and helmets. Sports equipment should not be used in darkness or in extreme weather conditions. Swimming and water

safety lessons may help prevent drowning. Safety instruction regarding matches, lighters, barbecues, stoves, and open fires can prevent major burns. Wearing seat belts remains the most important way of preventing major injury or death due to a motor vehicle accident[35].

Development of Fear in Children:

Most fear theories assign cognitive mechanisms as a central position, both in the appraisal of potential threat and in the development of mechanisms of defense designed to reduce fear .The relationship between cognitive development and fear is marked in the development of fear in children. The development of fear in each cognitive developmental stages based on Piaget's theory. Fear in children is caused by either an innate basis or a social learning process [34]. Fear is viewed as an innate reaction because it appears to develop in part out of a biologically determined pattern of response to situations that are potentially dangerous to survival. On the other hand fear as a social learning process is related to many factors including past experience, situational stimuli, temperament and cognitive development [36].

According to Piaget, children in the concrete operational period, roughly dominant from 7 years old to 11 years old, develop operational thinking which allows children mentally to combine, separate, order, and transform objects and actions. Such operations are considered concrete because they are carried out in the presence of the perceived objects and events. Children who have reached the concrete operational period are able to develop the concept of reversibility and begin to use logic for problem solving. Therefore, fears of imaginary threats have declined and have been replaced by other fears that coincide with their cognitive abilities [37].

Ollendick (1991) [38] reported that common fears of third and fourth graded American children are: a burglar breaking into house, being sent to the principal, bombing attacks, being hit by a car or a truck, falling from high places, earthquakes and not being able to breathe. In a previous investigation, Ollendick, King & Frary (1989) [39] compared self-reports of fear for Australian and American samples. It was reported that the two samples yielded identical fear prevalence. Three common fears that were added to the fears reported by American children in the first study were getting burn from fire, death or dying and getting lost in a strange place. Dong, Yang & Ollendick (1994) [40] used the same instrument to measure fear of school age Chinese samples , ten common fears were not be able to breathe, earthquakes, getting shock from electricity, bears or wolves, failing a test, having my parents argue, being hit by a car or a truck, getting poor grades, getting burned and snakes. Six of the top ten fears were identical to those reported by Australian and American children. Although fear can be affected by cultural and social factors, common fears reported by most school age children are related to fear of danger and death, fear of bodily injury, and fear related to social interaction such as fear of failure and criticism and fear of punishment [41].

Fear in School Age Children:

The prevalence of fear in school age children is nearly always related to physical harm, dangerous situations, medical fears and psychic stress related to fears. A general decrease in anxiety and fearfulness in school age children is most marked for the 7 to 10 year old [42] .At approximately 11 years of age, a degree of stability for all fears with the exception of psychic stress related fears and medical fears becomes apparent [43,44]. Although the types and numbers of children's fear tend to decrease with age, a decrease in the level of fear exhibited is not necessarily an indication of a decrease in fear intensity [45- 47].

Manifestations of Fear in Children:

In general, the manifestations of fear in children include physiological, behavioral, emotional and cognitive reactions .Physiological symptoms reflect activity in the autonomic nervous system's (ANS) sympathetic and parasympathetic branches [48]. Therefore, fear is likely to affect almost every system. Physical symptoms that appear to have a connection with fear in children include palpitation and tachycardia, diarrhea, vomiting, abdominal sensation or diffuse abdominal pain, enuresis, trembling, tics, headache, and feelings of suffocation, choking, and sweating [49]. Behavioral manifestations of fear involve avoiding threatening situations or escape behaviors. Children's behavioral response to fear can be categorized into three groups: First is an active behavior which includes physical attempts to avoid threatening situations, escape behavior such as running or resisting medical or nursing procedure, destructive behaviors to self, object and environment. Expressive behaviors also include crying, screaming, whining, nail biting, clinging or fighting. Passive behaviors are a second group which include excessive sleeping or television watching, and a decrease in gesture, play initiation and play repertoire. The third one is habit changes and /or indicators of developmental regressions which include variations in communication, activity, and eating. Restlessness may be also observed. The child's thoughts about what is happening and how he or she thinks about and reports feeling is part of this experience. Fear can also be manifested in the form of distorted information-processing [50].

Children's Concepts of Physical Illness:

Although the cognitive structures in children are universal, they represent a necessary condition for any successful acculturation. Children in some cultures might have more extensive relevant experiences which could produce cultural differences in thinking[51, 52]. Children's concepts of illness do evolve in a systematic and predictable sequence consistent with Piaget's theory of cognitive development. Their concepts of specific illnesses, which increase markedly during the school age years, are a synthesis of real knowledge and imaginative distortions [53-55].

Fear of Hospitalized School Age Children:

Children's fear related to hospitalization began to be studied in the late 1960s[56].Two possible sources of information regarding medical fear exist. The first source is adult assumptions based on observation, memory, and interaction with the child. The second source is children's self reports [20]. Much of the researches on the events that children find fearful in hospitals have been based on the first source. For example, Visintainer & Wolfer (1995) [57] classified five categories of common sources of children's fear from studies based on adult perceptions: (1) physical harm or bodily injury (2) separation from parents and the absence of trusted adults (3) the strange, the unknown, and the possibility of surprise (4) uncertainty about limits and expected acceptable behavior (5) relative loss of control, autonomy, and competence. Adult's perceptions of the source of children's fear are likely to be accurate. However, some sources of anxiety may be unrecognized by adults. It is important to ask children directly what they identify as fearful [57].

When children are hospitalized, they are confronted with frightening, stress-producing events. They have to adapt to the new environment and physical changes brought on by medical treatment [8].They experience a new and unfamiliar environment in which everything is different from previous experiences. Not only the setting is unfamiliar but also the routine functioning and people are unlike those at home or school [58]. It is a common experience for hospitalized children to experience the presence of over 50 adult strangers within a 24-hour period, contributing to increased stranger anxiety [50]. Hospital food, television system, clothing, and play time are all unfamiliar, social rules or taboos are often breached or violated. When school age children undergo surgery, they are also threatened by masked strangers working in an often highly technical, sterile, non-child-friendly setting .Unfamiliar language and jargon increases the complication of the experience. Hospitalized school age children are, therefore, cut off from their families, friends, and the familiar world that they have begun to master and become dependent on strange hospital personnel [59].

Although school age children can increasingly tolerate separation from their parents, it is identified as a major source of fear of most who are hospitalized [10]. Hart & Bossert (1994)[20] found that the item with the highest mean score on the Child Medical Fear Scale was being to stay a long time. They were also afraid of being away from family .Separation from parents during hospitalization and surgery is confounded with conceptions of illness causality itself [53]. It is viewed as abandonment and loss of parental love [60]. Having an operation is also seen by school age children as a punishment [61]. In addition, the stressful nature of hospitalization and surgery may lead to an increase in the need for parental security [62].

In addition to the separation from parents, hospitalized school age children experience separation from peers which leads to disruption of peer relationships [20, 63]. Besides being isolated from their peer group, they also fear that hospitalization may impair their ability to achieve and compete. School age children see medical and surgical procedures as body mutilation [62, 50]. Therefore, they fear that those procedures may cause disability, disfigurement or change body appearance that will set them apart from their contemporaries [37, 64]. This further threatens the autonomy and control of school age children.

Hospitalized children lose control over not only their bodies as their own possession, but also the body functions [59]. Furthermore, hospitalized children are often restricted in movement. They are confined to bed or indoor [20]. Loss of motor activity is another source of loss of control in hospitalized school age children because they lack the information or ability to control their situation [65]. In addition, discomfort originating from illness, injury, medical procedures, or anticipated pain also produce fear in school age children [37].

Pain is an important source of school age children's fear related to hospitalization and surgery [9,10,50]. Alex & Ritchie (1992) [62] found that the predominant concerns, perceived threat to body integrity and physical well being, were expressed through pain-related anxiety in surgical school age children. Elements of apprehensive fantasy were usually involved in these children's perceptions. Pain was viewed as an indicator of the possibility of permanent crippling or recurring of illness. Some children also fear that the pain would spiral to unbearable intensity or that it may never go away. Cognitive

processing of school age children is capable of projecting into the future, allowing school age children to anticipate pain from being in the hospital, and from medical procedures and dressing [62].

Fears of intrusive procedures primarily in the form of surgery and injections are reported by school age children [٢٠]. Fear of injection is one of the major sources of preoperative fear of 10-12 year-old children [61]. Menke (1981) elicits children's most basic medical fears: choking, suffocation, uncertainty about going to sleep, and the fear of waking up in the middle of the surgery or bleeding to death intraoperatively [62,11]. Besides intrusive procedures, hospitalized school age children also experience fear of the unknown caused by their limited knowledge of what to expect in the hospital and its outcome [14,66]. Some children have only a vague idea of what to expect, therefore they cannot mitigate the situation by realistic anticipation [67].

Fear is a function of the amount of stress that impinges upon an individual and that individual's interpretation of the stressful situation as personally dangerous or threatening. Fears of hospitalized children are, therefore, a result of an interpretation of potential harm in the hospital environment [68].

Psychological and Physiological Effects of Hospitalization and Surgery on School Age Children:

Hospitalization for surgery inevitably provokes feelings of anxiety and fear for both the child and family [69]. The preoperative period is the most anxious and fear-producing period for children [11]. A high preoperative fear state is associated with both psychologically and physiologically adverse outcomes [11,70, 71]. Preoperative fear in children, which is characterized by subjective feelings of tension, apprehension, nervousness, and worry, may be expressed in various forms [72]. The effects of preoperative fear may be present two weeks after surgery and may lead to negative behavioral changes which interfere with the daily functioning of children [11,73,74]. Long-lasting subsequent psychological effects and some interference with normal development have been described, including nightmares, separation anxiety, eating problems, increased fear of doctors, increased post operative pain, increased postoperative analgesic requirements, and prolonged recovery and hospital stay [28,70 ,75] .

Children and Coping:

There have been many models of coping with illness postulated [76,77] , but these models do not specifically address children. Peterson, Harbeck, Chaney, Farmer and Thomas (1991) [78] point out the problems associated with using models of coping developed for adults to describe coping in children. Children think, behave, and respond differently than do adults. As coping is a process of thought, behavior, and response, children must then cope differently than do adults [78].

Garmezy (1987) [79] states that coping is an important mediator of the children's experience which shapes personality development and influences adaptability and resilience in difficult situations .Werner and Garmezy (1984) [80] have studied resilient children in the context of coping studies and highlighted the importance of considering this variable when attempting to study the coping processes of children .