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Adolescents' Perceived Importance of and Satisfaction with Development Needs During Hospitalization

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ADOLESCENTS' PERCEIVED IMPORTANCE OF AND SATISFACTION WITH DEVELOPMENTAL NEEDS DURING HOSPITALIZATION

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ABSTRACT

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The purpose of this study was two-fold. First, was to examine the relative importance of needs of hospitalized adolescents. Second, was to measure perceived satisfaction with five selected developmental needs. This study was a replication of earlier work by Gusella, Ward, and Butler (1998). A descriptive design was utilized to answer the research questions. Fifteen hospitalized adolescents admitted to the general pediatrics unit provided the data for this study. Data analysis using summative means was performed to rank and compare importance and perceived satisfaction. Adolescents ranked medical information as their most important need during hospitalization followed by mobility, visits from friends and family, independence, privacy, education, recreational needs, and meeting other teens in the hospital. Overall, a high level of satisfaction was reported with the five selected developmental needs. The findings of this study have important implications for nursing and other healthcare professionals as they interact with adolescents.

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CHAPTER I

INTRODUCTION

Hospitalization is a cause of stress and anxiety to all patients and their families. Adolescents are no exception. In addition to the physical diagnosis requiring admission, adolescents bring a variety of developmental needs to their hospitalization. Denholm and Ferguson, (1987) identified five basic needs of hospitalized adolescents: privacy, peer visitation and contact, mobility, independence, and educational continuity. These five basic developmental needs of adolescents pose a challenge to nurses, and to all health care professionals, as well as the health care system for three reasons.

First, health care reform and managed care have infiltrated most health care delivery systems. This has changed the way health care is delivered and decreased the number of days an adolescent is hospitalized. Adolescents may be admitted for diagnosis only, then sent home with intravenous therapy or other homebound health services. This short length of stay makes it difficult for all professionals to form relationships conducive to meeting developmental needs. This short length of stay also causes the shift of nursing focus from the developmental needs of the patient to discharge planning needs. The nurses' limited time is spent teaching and collaboratively discharge planning. Developmental specialists such as Child Life Specialists are often overwhelmed in their role of supervising activities for all inpatients. In addition, their important positions are often the first to be questioned or eliminated in efforts to contain the rising cost of health care.

Second, in a further effort to contain the rising cost of health care, many hospitals have implemented the use of unlicensed assistive personnel. These personnel perform routine tasks as delegated by the supervising registered nurse such as taking vital signs, measuring intake and output, and helping patients perform their activities of daily living. While helpful in their role, these employees have not completed formal education in normal child or adolescent development and the implications of that development on health care needs. Therefore, often the employee with the most patient contact has the least preparation for the unique developmental needs of adolescents.

Third, the health care system has inherent flaws that threaten the above-mentioned five basic developmental needs. Many hospitals are teaching institutions, subjecting the hospitalized adolescent to frequent questioning and examinations in the attempts of the many nursing students, medical students, residents, and fellows, to learn. This need to learn may impose on the need for privacy. Peer visitation and contact may be limited by unit visitation and hospital isolation policies. Mobility and independence may be restricted by diagnosis, hospital infection control policies, and therapy requirements. The shortened length of stay impinges on the ability of the staff to make necessary school contacts to foster educational continuity while hospitalized.

While the challenges within the healthcare system are many, the importance of meeting the developmental needs of adolescents while they are hospitalized cannot be ignored. This concern regarding the developmental needs of adolescents in health care is not new. In 1987, at a multidisciplinary meeting of the Division of Maternal and Child Health of the U. S. Department of Health and Human Services, five recommendations were made regarding adolescent health care into the next millennium. The first and

foremost of those recommendations called for an awareness of " . . .adolescence as a developmental stage within the context of the entire life span, distinct from the stages of childhood and adulthood" (Bearinger & Gephart, 1987, p. 161).

As is further explored in the review of literature, adolescence is a very unique stage of development. This uniqueness is especially important within the context of hospitalization. Adolescents struggle to achieve independence; hospitalization fosters dependency. Adolescents aim to achieve personal identity; hospitalization contributes to depersonalization. Adolescents strive for a sense of control over their lives; hospitalization results in a loss of control. Adolescents place great importance upon peer acceptance and support; hospitalization separates them from their peers and social support groups.

Providing a developmentally friendly environment for adolescents within the boundaries of hospitalization can have positive outcomes after discharge. Denholm's 1989 study found that among hospitalized versus non-hospitalized adolescents, hospitalized adolescents scored higher on the Coopersmith Self-Esteem Inventory three days after discharge. Denholm contributes this finding to a sense of accomplishment and social support among the adolescents. (Other positive experiences related to hospitalization can be found within the review of literature).

Not providing a developmentally friendly environment for adolescents within the boundaries of hospitalization can also have negative outcomes after discharge. In their study of males with urogenital anomalies, Cogan, Becker, and Hofmann (1975) found that the impairment of body image while hospitalized may potentially have serious and

long-lasting consequences in relation to adolescent development. (Other negative experiences related to hospitalization can also be found within the review of literature).

Statement of the Problem

While the challenges of meeting the developmental needs of adolescents are many, it is important for nursing to measure its success in meeting these needs in providing a developmentally friendly environment for adolescents as consumers of health care. One such measure of this success is a study conducted by Child Life Specialists Gusella, Ward, and Butler (1998) in Nova Scotia, Canada. The researchers surveyed adolescents regarding their perception of how well their five basic developmental needs were met and how their own personal hospital experience could have been improved. The purpose of this study was, to examine from both nursing and developmental psychological frameworks, the relative importance of and perceived satisfaction adolescents have with their developmental needs during hospitalization.

CHAPTER 2

THEORETICAL FRAMEWORKS AND LITERATURE REVIEW

Two theoretical frameworks were utilized to guide the research process. First, Piaget's Cognitive Development Model (1958) was utilized to examine adolescent development. In addition to Piaget, commentary by Elkind (1974) was included, as he operationalized Piaget's model for use with the adolescent population and more specifically within health care. Second, the work of Levine (1967), a nursing theorist who constructed the conservation model, was utilized to examine how the developmental needs of adolescents and the conservation principles are interrelated.

Theoretical Framework: Piaget's Cognitive Development Model

Piaget's framework consists of six concepts including: conservation, assimilation and accommodation, equilibration, cognitive structures, mental operations, and schemas. While all of these concepts work together to explain and predict cognitive development, for the purpose of this study, Piaget's cognitive structures were used.

The cognitive structures Piaget proposes for development includes sensorimotor intelligence, preoperational thought, concrete operational thought, and formal operational thought. Piaget describes the cognitive stage of adolescence as the beginning of formal operational thought. Piaget defined this as, "Formal thinking is both thinking about thought . . . and a reversal of relations between what is real and what is possible" (Gruber and Voneche, p. 438) and as a time when adolescents begin to take their place in adult society.

Newman and Newman (1991) name six new conceptual skills that emerge during the stage of formal operational thought. First, adolescents are able to mentally manipulate more than two categories simultaneously. Second, adolescents are able to think about changes that come with time. Third, adolescents are able to hypothesize about logical sequences of events. Fourth, adolescents are able to understand and foresee consequences of events and actions. Fifth, adolescents are able to detect logical consistency or inconsistency in a set of statements. And sixth, adolescents are able to think in realistic ways about themselves, others, and the world.

At each new phase in cognitive development, Piaget suggests that children experience egocentrism. The adolescent manifestation of egocentrism, according to Piaget, results from the adoption of adult roles as the adolescent not only tries to adapt his ego to the social environment, but also tries to adjust the environment to his ego. Piaget further wrote, "the adolescent goes through a phase in which he attributes an unlimited power to his own thought so that the dream of a glorious future or of transforming the world through ideas seems to be not only fantasy but also an effective action" (Gruber & Voneche, p. 441).

Elkind (1974) proposes that there are two forms of egocentrism specific to adolescents. The first form is imaginary audience. Elkind (1984) described imaginary audience as; "the young person anticipates the reactions of other people to himself. These anticipations, however, are based on the premise that others are as admiring or as critical of him as he is of himself" (p. 91). Elkind suggests that this unique phenomenon of imaginary audience contributes to some of the self-consciousness and self-admiration often displayed in adolescents.

A second form of egocentrism hypothesized by Elkind (1974) is that of the personal fable. This is thought to be a complement to the imaginary audience. Elkind defines this as; "[a] complex of beliefs in the uniqueness of his feeling and of his immortality might be called a personal fable" (p. 93). This unique form of egocentrism may contribute to explaining many adolescent risk-taking behaviors and lack of compliance with medical regime for chronic illnesses (Elkind, 1984). Piaget predicts that the egocentrism of adolescence diminishes as the adolescent enters the occupational world or begins serious professional training.

Piaget's work has been adapted by many fields in the psychosocial sciences to help explain and to predict children's cognitive development. It has been found to be accurate and true across many decades and cultures. Newman and Newman (1991) state that a criticism of Piaget's framework, however, lies in the impression that progression from one stage of cognitive development to the next is uniform and occurs all at one time.

The stage of development that precedes formal operations is concrete operations. Briefly, there are three concepts in this stage; conservation, classification, and combinatorial skills. These concepts bring children in touch with the logic and order of the physical world. The transition from concrete operations to formal operations is not sudden or uniform. While not entirely consistent, according to Newman and Newman (1991), there is a progression through levels of problem-solving approaches between the ages of 11 and 15. Piaget suggested that the progression between concrete and formal operations is extremely relative and dependent upon society and genetics.

Theoretical Framework: Levine's Conservation Model

Levine's conservation model (1967) was the second theoretical framework used to guide this research project. Nursing process as described by Levine consists of three phases: trophicognosis, intervention, and evaluation. Trophicognosis is defined as a, "nursing care judgment arrived at by the scientific method" (Fawcett, 1995, p. 184). This process replaces the traditional process of the nursing diagnosis. The first step of trophicognosis involves observation of the patient and gathering of data. Upon data collection, provocative facts are identified and a testable hypothesis is formed. This results in the trophicognosis, which forms the basis for the second phase of the nursing process, intervention (Fawcett, 1995).

Levine's theory focuses on the conservation of the individual. Levine (1969) writes, "Conservation means 'keeping together . . .to keep together' means to maintain a proper balance between active nursing intervention coupled with patient participation on the one hand and the safe limits of the patient's ability to participate on the other" (p. 11). Levine (1969) states that the conservation principles "have as a postulate the unity and integrity of the individual, recognizing that every response to every environmental stimulus results from the integrated and unified nature of the human organism" (p. 11). The four conservation principles are, therefore, the conservation of structural integrity, the conservation of patient energy, the conservation of personal integrity, and the conservation of social integrity. For the purposes of this study, all four-conservation principles were applied. According to Levine, the goal of all nursing interventions is to maintain the unity and integrity of the patient, or to conserve.

Conservation of structural integrity addresses the principle that the body attempts to maintain or restore itself by preventing physical breakdown and promoting healing (Fawcett, 1995). Conservation of structural integrity emphasizes that the individual's defense against the hazards of the environment are achieved with the most economical expense of effort. It results in repair and healing to sustain the wholeness of structure and function (Levine, 1991). Levine (1996) defines healing as a defense of wholeness. According to Levine (1967), effective nursing care requires recognition of functional change in its earliest stages, and particularly when structural integrity is obviously threatened by disease. In this study, the focus on structural integrity assumed an alteration in that integrity requiring hospitalization for the adolescent as a result of a variety of diseases or injuries.

Conservation of patient energy refers to balancing energy output and energy input to avoid excessive fatigue. According to Levine, the integrated response of the entire organism to environmental stimuli is nowhere more apparent than in the assessment of his energy exchange (Levine, 1967). Both acute and chronic diseases require care balancing the energy output and input by nursing. Conservation of energy assures that the body naturally spends energy carefully with essential priorities served first (Levine, 1991). The conservation of energy as a goal of nursing care requires continuing assessment of the effects of nursing activity and recognizing the energy relationships as they are manifested by response to care (Levine, 1967). For the purposes of this study, conservation of energy was manifested by the study variable mobility. The ability to be mobile requires the nursing intervention of a proper balance of energy output and input,

as well as its inclusion as one of the basic developmental needs of hospitalized adolescents.

Conservation of personal integrity has at its foundation the patient's sense of identity, self-worth, and acknowledgement of their uniqueness (Fawcett, 1995). Illness threatens this foundation and the subsequent experience of hospitalization may exaggerate that threat. Levine (1996) writes, "A person is most vulnerable when confronted with a loss of independence – an event that occurs every time a person becomes a patient" (p. 40). The dependency of a patient begins with violation of their privacy and intrusion of strangers into their personal space needs. Nursing interventions must acknowledge this need for personal integrity by valuing privacy, protecting a patient's space needs, respecting importance of the patient's personal possessions, properly addressing the patient, and supporting the patient's defense mechanisms whenever appropriate. In this study, the conservation of personal integrity was operationalized by the perceived satisfaction of hospitalized adolescents with their developmental needs for privacy and independence.

Last, the conservation of social integrity involves the definition of each person by the communities that surround and include him. The social integrity of each person is created by family and friends, workplace and school, and by religion, cultural and ethnic heritage (Levine, 1996). It is within this social context that the patient's expectations for healthcare and his beliefs regarding health and illness are formed. The placement of an individual in the hospital does not sever social ties, but rather begins to educate the individual's social community for a potential transition of the care at discharge. Nursing interventions specific to this conservation of social integrity include considering the

patient's family and friends as part of their care, recognizing that the social system of the hospital is artificial, paying attention to the care of the patient within the community, and recognizing that the nurse-patient relationship is a social one controlled and disciplined by the professional nurse (Fawcett, 1995). For the purposes of this study, the adolescent's perception of the adequacy of peer visitation and contact and educational continuity was considered as a measure of the conservation of social integrity.

The final phase of the nursing process is evaluation. It is in this phase that the trophicognosis is reviewed and revised in light of the patient's responses to various interventions and new information gathered (Fawcett, 1995). The patient's response to how well they felt their developmental needs were met while hospitalized was measured in this study.

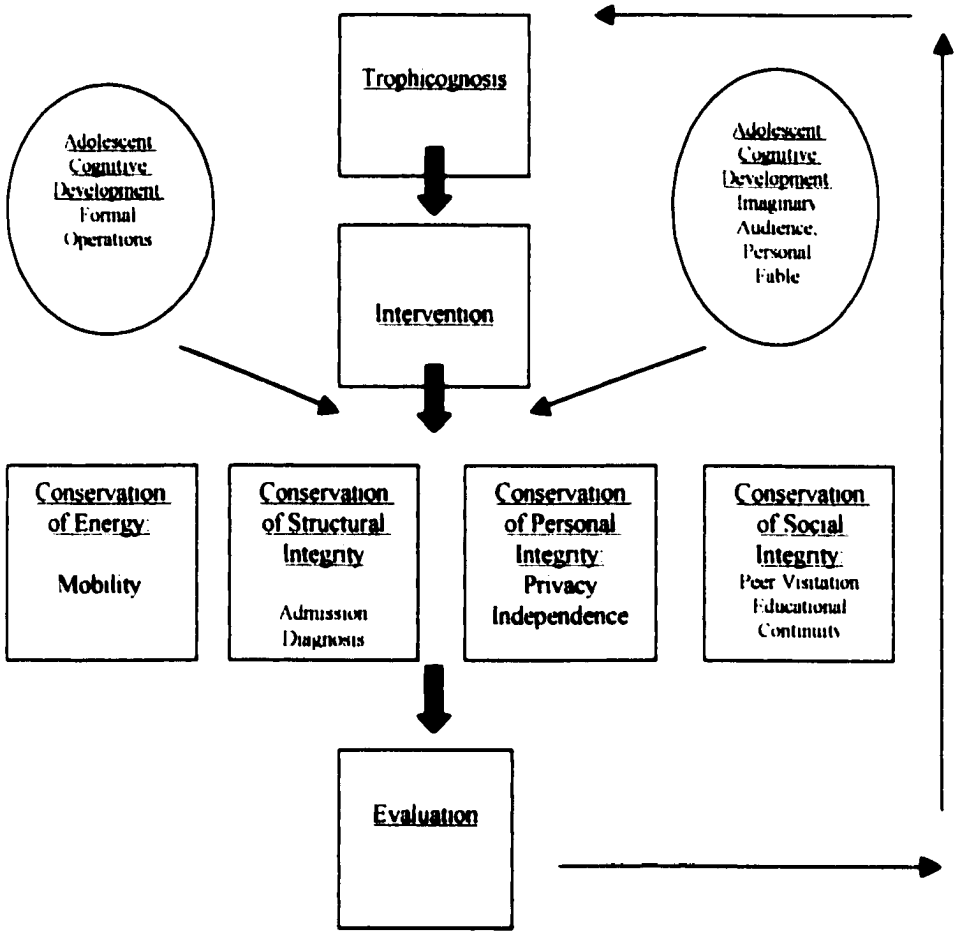
The strength of Levine's framework is its focus on the individual as a whole person. The goal of nursing interventions, according to Levine's framework is conserving the whole person. This is especially applicable in a study involving adolescents since the adolescent's development plays a significant role in their response to illness and hospitalization. A limitation of Levine's study for nursing in general is that is focuses on the patient in a dependent, illness state only, offering little guidance on health promotion or health maintenance. However, for the guidance of this study, Levine's focus on the client during an illness was thought to be adequate.

Figure 1 demonstrates the interrelationships between the two conceptual frameworks. The concepts from Piaget's framework are shown as ovals and the concepts from Levine's framework are displayed as squares. The study variables are also included in the squares of Levine's framework. The arrows to the right of the figure represent the

on-going nursing process. The arrows in the center of the figure represent the importance the unique developmental attributes of the adolescent need to play on nursing interventions.

Figure 1

Concept Diagram: Concepts and Study Variables



Review of the Literature

Uniqueness of the adolescent. The following review is a short summary of the numerous studies available that describe the uniqueness of the adolescent. Based upon

this uniqueness, several implications for adolescents within the health care system, both inpatient and outpatient, have been made by the author.

Adolescents differ from adults and younger children in their causes of death and injury, and therefore reasons for hospitalization. In 1950, the major causes of mortality and morbidity among teenagers shifted from infectious to behavioral etiologies (Sells & Blum 1996). According to Eldridge (1997), the top three causes of death among adolescents in order are unintentional injuries, 78% being motor vehicle accidents, homicide and legal intervention, and suicide. Sells and Blum relate these high motor vehicle fatalities to alcohol use. They report that drivers between the ages of 16 and 20 involved in fatal crashes are more likely than any other age group to be alcohol impaired. The top three causes of injury also according to Eldridge are motor vehicle accident, suicide and assault or abuse. Sells and Blum write that other morbidities during adolescence are alcohol and tobacco use, illicit drug use, and teenage pregnancy.

Nerdahl et al. (1999) wrote, "The shift to social causes of ill health is evident: risky behaviors increasingly threaten the health and well being of this age group [adolescence]" (p. 184). The implications of these risks calls for health care providers to; (1) increase their awareness and education of adolescent health concerns, morbidity and mortality, (2) routinely screen adolescents for patterns of dangerous psychological and physical behaviors, and (3) educate adolescents in risk reduction and health promotion.

Entry into adolescence is marked by the physical changes of puberty. Puberty is defined by Graber, Petersen, and Brooks-Gunn (1996) as, "the period of physical growth leading to the attainment of reproductive capability" (p. 25). Five basic areas of physical growth are noted during puberty: (1) acceleration followed by the deceleration of skeletal

growth (growth spurt), (2) change in body composition and distribution of fat and muscle tissue, (3) development of the circulatory and respiratory systems resulting in greater strength and endurance, (4) maturation of the reproductive organs and secondary sexual characteristics, and (5) changes in the nervous and endocrine systems, which regulate and coordinate the other pubertal events (Graber et al.).

These drastic changes in the body at puberty influence the adolescents' perceptions and feelings about their bodies. For males, the increase in height and weight may be a positive experience, while for females a weight increase may be a negative experience. The Adolescent Mental Health Study by Petersen (1984) demonstrated that early-maturing girls exhibit a marked decline in their body image across adolescence. Conversely, early-maturing males were more satisfied on a short-term basis with their physical appearance as early maturation is often advantageous for males. Interestingly, Petersen also found that later developing boys had the highest body image from eighth to twelfth grade. These drastic changes in physical appearance offer the following implications for health care providers: (1) reassurance to the adolescent and education regarding normal physical and sexual development, and (2) assurance of privacy during procedures and physical examinations.

Social relationships change during adolescence. Peer groups begin to have both positive and negative effects on the individual adolescent. Females are thought to have more supportive friendships during adolescence than males. Adolescents most influenced by friends are those who have poor relationships with other people, are considered less popular, and who spend little time engaged in activities such as work or athletics (Berndt, 1996). Adolescents' achievements, attitudes, and aspirations are

strongly affected by those of their close friends. Berndt cautions, however, that a friend's influence is a mutual process in that adolescents influence their friends as their friends influence them. This influence, or willingness to comply with friends' suggestions, increases in early adolescence and decreases in later adolescence.

Based upon his synthesis of the literature, Berndt (1996) writes that adolescents are thought to potentially influence each other in four ways. First, coercive power may be used. This is thought to be a weak influence as it is easily resisted and is described as a punishment for noncompliance with a suggestion or command. Second, reward power is utilized as a control over resources that adolescent may value, companionship and support. Third, referent power refers to adolescents choosing friends they regard as popular, athletic, or outstanding in any way in hopes of becoming more like them. Fourth, expert power is employed when one person uses their special knowledge of a particular subject to influence others.

Also unique when compared to other stages in development, adolescents may regard only one or two friends as especially close and other friends are perceived as more peripheral. Therefore, as a child moves into adolescence, the frequency of interactions with close friends is increased. Also, as a child moves into middle adolescence, the receptiveness to support from friends is increased. This support, according to Berndt (1996) can take four forms. The first is informational support, or advice and guidance in solving problems. The second form is instrumental support, or help with various tasks. Third, companionship support involves adolescents doing activities together. And fourth, esteem support involves mutual encouragement and congratulations on achievements.

These important changes in social and peer influence and support suggest that the health care professional recognize the importance of peer relationships in adolescence. Carefully assessing the individual adolescent's peer group and the potential positive and negative influence and support is also vital in delivering care to this population.

The onset of adolescence also brings about changes in family relationships. Adolescence is a time of de-idealization of parents, increased emotional distance between parents and the adolescent, and an increase in discrepancies between parents' and adolescents perceptions of important issues. Holmbeck (1996) estimates that about ten percent of homes endure serious relationship difficulties during adolescence. Sources of daily conflict are reported by Holmbeck to include issues involving household responsibilities and privileges. Arguments between parents and adolescents tend to occur at a rate of about one every three days. Similar to peer relationships, however, the relationship between the adolescent and their family is reciprocal. As adolescence progresses, the relationship between the parent and the adolescent is changed from one of unilateral authority to one of mutual respect and cooperation.

The interfamily conflicts during adolescence do not have to have negative outcomes. Holmbeck (1996) suggests that disagreements in families during adolescence contribute positively to adolescent identity exploration and conflict resolution skills. Positive outcomes are most likely to occur when the adolescents are provided opportunities to express their differing opinions within a context of familial connectedness. Based upon these changes in the family framework the health care professional can: (1) assess the interfamilial relationships for tension and strain as a result of the changes of adolescence, (2) intervene in familial relationships when

necessary, (3) provide anticipatory guidance to families regarding anticipated changes during adolescence.

Pediatric nurses and the care of adolescents. Because of the unique developmental needs of the adolescent, providing thorough, sensitive, and compassionate nursing care can be a challenge both for advanced practice nurses in an outpatient setting and for nurses in a general pediatric inpatient setting. Nerdahl et al. (1999) surveyed 257 Pediatric Nurse Practitioners (PNPs) using self-reported competencies of adolescent care based on 28 health care issues. The PNPs were surveyed on both their knowledge and skill level of each issue and their interest in learning more about the particular issue. The two health issues most PNPs reported feeling competent with were obesity and adolescent parenting. The two health issues PNPs reported feeling the least competent with were gay/lesbian/transsexual/bisexual issues and gang-related activities. They reported a positive correlation ($r=.30$, $p < 0.001$) between overall self-perceived knowledge level and interest in training. Overall, 75% of the PNPs surveyed believe they were moderately or highly skilled in managing key adolescent health issues and care needs. Perceived barriers to providing care to adolescents were reported as lack of community resources for referral and lack of training and knowledge. This study was limited in its survey style of self-reporting and lack of test-retest information on the data collection tool. Also, a correlation coefficient of .30 is a relatively small correlation given the sample size of the study.

Wall-Haas (1991) surveyed 39 nurses who cared for adolescents in a large hospital regarding their sexual attitudes and nursing practice. Wall-Haas wrote that sexuality is a component of identity development in adolescents and since hospitalization

interferes with identity development, sexual development is also a concern. Wall-Haas found that 68% of the nurses, when recognizing an opportunity to discuss sexuality with their adolescent patient, did not discuss it. Reported barriers to discussing sexuality with patients included; lack of knowledge, embarrassment, patient embarrassment, not the job of the registered nurse, and the situation did not arise. Wall-Haas encouraged nurses to become more educated regarding sexuality issues. This study was limited by a relatively small sample size with only one center for data collection.

Kowpak (1991), a Women's Health Nurse Practitioner, surveyed 179 ninth to twelfth graders regarding their health concerns. In addition, 74 physicians, nurse practitioners, and school nurses were surveyed regarding their perception of adolescent health concerns. More than 70% of the student responses reported concern for Acquired Immune Deficiency Syndrome (AIDS), schoolwork, making friends, sex, discrimination, and dental problems. When the sample was divided by gender, females reported concerns with menstruation, rape, abuse, pregnancy, sadness, obesity, and violence. Conversely, males reported concern about homosexuality, sex, auto accidents, and being underweight.

Greater than 80% of the health care providers perceived that sex, acne, making friends, being overweight, schoolwork, and menstrual periods were the areas of greatest concern for the students. Using a chi-square analysis, Kowpak (1991) found statistical differences between the students' actual health concerns and health care providers perceived health concerns at the <0.01 significance level for the following health concerns: menstrual periods (X^2=51.3), dental problems (X^2=35.8), obesity (X^2=34.7), auto accidents (X^2=30.9), acne (X^2=30.2), sex (X^2=23.9), discrimination (X^2=19.2),

AIDS (X^2=17.8), friends (X^2=16.5), violence (X^2=16.2), rape (X^2=10.7), coughing (X^2=7.8), pregnancy (X^2=6.9), and drug use (X^2=6.3). The author was not clear on which group had the greater concern, only that there was statistical difference between the two groups in their concern. Kowpak concluded that: (1) adolescents have more diverse health concerns with greater magnitude than expected by health care providers, (2) health care providers underestimate adolescent psychological and social health concerns, and (3) female adolescents are more concerned about their health and gender-specific and violent issues than males.

The only study found on nurses and inpatient adolescents was conducted by Beck, Adler, and Irwin (1985). In an effort to study potential healthcare provider stereotypes of adolescent patients and the potential consequences of those stereotypes on the management of the patient, the researchers surveyed nurses using a vignette that described a non-compliant adolescent and adult in a similar hospital situation. They found that the nurses surveyed had similar preferences for actions for both the adult and adolescent patient. Similarly, they found that the nurses surveyed did not consider the adolescent patient more difficult to manage. They did find, however, that the difference in proportions of nurses making developmental attributions for the adolescent and adult patient was significant (X^2=13.23, df=1, $p<0.001$). The conclusion of the study was that stereotypes of adolescent patients do not exist. This study was limited in its self-reporting nature of survey data collection.

Five basic needs of hospitalized adolescents. Based upon the uniqueness of adolescence as a developmental stage, Denholm and Ferguson (1987) were the first to propose the five basic needs of hospitalized adolescents as privacy, peer visitation and

contact, mobility, independence, and educational continuity. There are several investigations that support the existence of these five basic needs.

The Society for Adolescent Medicine (1997) defines privacy as, "freedom from unsanctioned intrusion" (p. 409). Applying this definition of privacy proposes that a wish for privacy and a general reluctance to reveal oneself indicates a feeling of being under the scrutiny of other people. In his review of the literature, Lincoln (1978) hypothesizes that frequent examinations and loss of body control may bring feelings of shame and loss of self-esteem and destroy an emerging sense of pride in oneself.

Honig (1982), a psychiatrist who conducted group meetings on adolescent medical, non-psychiatric, wards, compiled an article based on frequently reported themes during his meeting. With regard to privacy, he wrote that feelings of loss of dignity and loss of control over one's body were common among adolescent inpatients and frequently voiced as concerns during those group meetings.

The adolescent's need for privacy while hospitalized was supported by Miller, Friedman, and Coupey (1998). They surveyed 95 adolescents, 59 inpatients and 36 outpatients, regarding their rooming preferences during hospitalization. When the data were analyzed by gender, females were found to be significantly more likely than males to prefer to room alone, 53% versus 28% respectively ($X^2 = 5.34$, df=1, $p < 0.05$). The researchers felt that this was a result of self-consciousness during adolescence, particularly among adolescent females. This study was somewhat limited by its small sample size and that the authors reported that their sample consisted of mostly minority adolescents from inner city New York, limiting the generalizability of the conclusions.

The literature on hospitalized adolescents supports the belief that peer and family visitation is an important aspect of medical care. Denholm and Ferguson (1987) suggest that distancing the adolescent from his or her peer support group may cause a form of separation anxiety. Schowalter and Lord (as cited in Denholm, 1985) discovered that 55% of adolescents prefer their parents as visitors while they are hospitalized, 27% prefer peers, and 18% prefer other adults. Honig (1982) writes that during his meetings, criticisms are frequently voiced regarding telephone use and visitor restrictions.

Stevens (1986) interviewed adolescents both before and after hospitalization for surgery. Of the 63 subjects in the study, 42 or 65% reported concerns about being away from influential and trusted people in their social network. Stevens also found that the younger adolescents (n=32; 76%) expressed more concern with separation than older adolescents. Stevens suggested that this had to do with anxiety caused by separation from the mother. Considerations in the interpretation of these findings included a relatively small sample size, low mean age of participants (M=13.8), and the use of a telephone survey method.

Miller et al.'s research (1998) also supports the need of adolescents to have peer and family visitation during their hospitalization. They found that the majority of inpatients (n=59) and outpatient groups (n=36), 93%, indicated a preference for a companion, in particular their mother, to stay with them overnight in the hospital during medically difficult times. This finding was not affected by gender.

There was also support in the literature for the basic developmental need of mobility. Honig (1982) reported that adolescents frequently complained of a lack of mobility during his group meetings on medical wards. He reported that patients describe

their hospitalization as, 'being locked up in a jail' or a 'crazy house'. He found that complaints about lack of activity, fresh air, and boredom were practically universal. Denholm (1985) suggested that immobilization was an enforced loss of control that forces the adolescent to become dependent upon caregivers. Lincoln (1978) in his own review of the literature wrote of the importance of movement in the psychosocial development of the child. In the younger child, he writes that, "mobility is an urge or drive which is essential for exercising such functions as mastery, integration, reality testing, and control of impulses" (p. 59). Conversely, Lincoln describes immobility in the adolescent as a source of frustration and deprivation of pleasure. Lack of mobility can also be viewed, according to Lincoln, as a threat to self-preservation potentially causing anxiety and aggression while blocking the outlet for the expression of aggression.

Independence as a basic need of a hospitalized adolescent can be thought of as similar to a sense of control. At least two authors describe the independency/dependency struggle occurring during adolescence. Denholm (1987) describes two instances where this paradox is illustrated. First, she describes this in the task of separation from parents while still maintaining a relationship with them. And second, she describes hospitalization as an unusual paradox since it forces adolescents to become compliant and dependent, which is eventually rewarded with a return to health and subsequent independence. Honig's (1982) work with hospitalized adolescents also illustrated this struggle. He reports that hospitalization temporarily interferes with developing autonomy, self-assurance, and peer acceptance. Farrelly (1994) hypothesizes that patients may recover more quickly if given a sense of control over some aspect of their lives within the hospital.

Finally, the ability to maintain educational continuity has been described in the literature. Illness and hospitalization may negatively impact academic progress, intellectual development, and the opportunity to interact with peers and teachers (Denholm, 1987). Denholm also writes that self esteem related to school achievement may diminish after a period of hospitalization. Because of this concern, the Association for the Care of Children's Health in its policy statements has made suggestions for ways health care professionals can maintain educational continuity.

Hospitalization as a positive experience. Studies have supported the belief that hospitalization can be a positive experience for adolescents. These studies also give indirect and additional support for the five basic developmental needs.

First, Denholm (1988) questioned previously hospitalized adolescents at 3 and 28 days following their discharge. Using the Hospitalization Self Report Instrument, Denholm described four major categories of positive experiences. Of the 66 participants in the study, 51 (77%) made positive comments regarding hospitalization. Of those positive comments, 48% focused on nursing care and preparation for procedures, 20% focused on the benefits of having personal reflection time, 17% focused on visitation and patient interaction, and 15% focused on activities and routine events such as entertainment and meal times. This study was limited by its descriptive design and survey collection of data among adolescents who may be overly selective and private in their comments to the researcher.

Denholm (1989) conducted a further study using a hospitalized experimental group (n=85) and a non-hospitalized control group (n=63). The two groups and their parents completed four instruments on two separate occasions to assess self-esteem, body

image, post hospital behavior, and perceptions of the hospital experience using the Hospitalization Self Report Instrument. Self-esteem scores among the hospitalized subjects were found to be significantly higher at the time of first testing than among non-hospitalized subjects ($F=6.852$, $df=1$, $p < .01$). Hospitalized males scored significantly higher at the time of first testing on the Body Attitude Score than the non-hospitalized control males ($F=2.032$, $df=24$, $p < .009$). Parents at the time of first testing revealed no significant differences between the hospitalized and non-hospitalized groups in behaviors exhibited in the home ($F=.882$, $df=8$, $p < .534$). Denholm noted that of the hospitalized sample, 46% of the parents actually reported and recognized positive coping and other positive behaviors.

At the time of second evaluation, approximately 25-28 days after the first, Denholm found that there was no significant difference between the two groups on self-esteem ($F=1.527$, $df=4$, $p < .200$) and behaviors ($F=.684$, $df=8$, $p < .705$). Denholm cautioned the reader in the interpretation of these findings. She writes, "Although negative behavior by hospitalized adolescents was not in evidenced immediately following discharge, reported reactions, thoughts, and behaviors of adolescents during hospitalization should not be minimized" (Denholm, 1989, p. 216). A strength of this study was that it is one of the few published to utilize a non-hospitalized control group and also to utilize relatively large sample sizes.

Later, Denholm (1990) utilized the same set of subjects from the 1989 published study in a four-year follow-up study. Of the 85 participants in the original study, 22 were located and participated. Participants again completed the Hospitalization Self Report Instrument and the Memories of Hospitalization Questionnaire. Among the 22 subjects

(male=8, female=14), 55 positive statements were made regarding their hospitalization. Of those positive memories, 38% (n=21) referred to nursing care, 25% (n=14) referred to visitation, 18% (n=10) with available activities, 9% (n=5) with each environment and positive atmosphere and personal reflection time. Eighteen of the 22 subjects described personal growth and insights gained as a result of hospitalization. The two most frequently mentioned among the nine identified were personal positive attributes (29%) and appreciation of good health (24%). Caution regarding these findings must be used due to the small number of original participants responding and the descriptive design of the study.

Stevens (1988) examined the anticipated and actual benefits of hospitalization for surgery among 59 adolescents. Stevens interviewed patients the night before surgery and two to three days following discharge. Stevens did not find a relationship between anticipated and actual benefits of hospitalization (X^2=1.24, p= 0.62). However, four categories of benefits were discovered: 1) improved physical well-being and/or appearance, 2) positive perception of self, 3) expansion of social network, and 4) respite from responsibilities. Of the four benefits, Stevens found that the expansion of social network was most consistently (34% preoperatively, 45% postoperatively) mentioned. Stevens cautions that the sample included a high percentage of young adolescents (mean age 13.8 years, SD= .57). An additional limitation to this study was in the data collection. Stevens interviewed the participants in person, both males and females. This may have influenced subjects to respond in socially desirable ways.

Hospitalization as a negative experience. The literature does not ignore the fact that hospitalization is a stressful time and can be a negative experience for children in

general and adolescents in particular. The literature in this area also serves as additional support for the existence of the five basic needs of hospitalized adolescents.

In examining the responses to hospitalization for all children, Mabe, Treiber, and Riley (1991) hypothesized that the younger the child, the greater the adverse effects of hospitalization. Particularly the authors felt that the distress caused by hospitalization was greatest between the ages of 6 months and 4 years. This concern that the younger the child, the greater the distress caused by hospitalization was supported by King and Ziegler (1981) who also suggested that the degree of distress a child experienced while hospitalized was related to the degree of rejection of insecurity felt by the child.

The thought that the distress associated with hospitalization is a result of separation from the mother was supported by early research by Douglas (1975). Douglas was interested in knowing if there was a relationship between admission to the hospital in the first five years of life and disturbances of learning or behavior in adolescence. The adolescents who had been hospitalized in their preschool years were assessed in four areas: (1) being reported as troublesome, (2) reading scores, (3) delinquency, and (4) unstable jobs. Douglas found that the longer and the more frequent the hospitalizations, the increased likelihood of scoring high on the adverse ratings scales. Douglas cautions the readers regarding his findings by reminding the readers that a suggestive relationship between variables does not establish a causal relationship. The reader must also consider that among Douglas' participants, 10% were admitted to adult wards, 47% were allowed no visiting at all, and only 16% were allowed unrestricted visiting.

The literature also shows evidence of adolescents' negative responses to and experiences with hospitalization. In Denholm's first research (1988), 66 previously

hospitalized adolescents were contacted regarding their hospitalization and data were collected using the Hospitalization Self Report Instrument. Of the 66 participants, 82% (n=54) responded with negative statements, which were later classified six categories. Thirty percent (n=29) reported negative experiences with medical and surgical events causing pain and anxiety. Twenty one percent (n=20) reported a lack of activities, reading materials, and comments regarding food. Fifteen percent (n=14) reported personal reflection time as a source of depression and loneliness. Fourteen percent (n=13) reported a dislike of specific procedures such as intravenous starts and insertion of nasogastric tubes. Last, 10% each (n=10 each) reported a negative experience with nursing care and visitation.

Denholm's later research (1990) involved 22 patients surveyed four years following their hospital discharge. This research identified the same six negative statements regarding hospitalization as her 1988 study with a different ranking. Among the 22 subjects, 39 negative statements were made. Four years after discharge, 28% (n=11) of the subjects felt that nursing care and preparation was a negative memory, 21% (n=8) activities and routine events, 18% (n=7) visitation and parent interaction, 13% (n=5) each reactions following medical and surgical events and procedures, and 7% (n=3) personal reflections. What Denholm found most notable in this study is that 32% of the subjects in this study reported no negative memories regarding their previous hospitalization.

In the 1990 study, Denholm provided the participants with an opportunity to suggest changes to the hospital environment and medical care. Nineteen of the twenty-two subjects responded with a total of 47 statements. The top two areas for suggested

improvement were nursing care and preparation, 30% (n=14), and quality of food and food choice, 25% (n=12). Denholm noted that the male participants requested an increase in the quantity of nursing staff, while the females referred to changes in personal characteristics of the nurses.

A negative result of hospitalization of the adolescent patient can be expressed as reluctance to leave the hospital. Denholm (1987) suggested three reasons for this unusual phenomenon. First, upon discharge adolescents may become aware of the consequences of hospitalization on their educational progress and the anticipation of missing school, falling behind, and the need to complete missed schoolwork. This may be a cause of significant anxiety for the adolescent. Second, it is also thought that returning to school may heighten self-consciousness regarding body image or appearance. Third, upon discharge the adolescent may become aware of disruptions to friendships and activities with peers.

Last, Stevens (1986) surveyed 63 adolescents before and after surgery regarding their perception of stressful events during hospitalization. Four categories emerged from this research. Thirty-four patients (54%) reported the anticipation of surgery and its risks as a stressful event. Thirty-five patients (55%) reported actual or potential pain as a stressful event. Twenty-nine patients (46%) reported visible and handicapping consequences of surgery as a stressful event. This category includes negative impacts of the surgery such as appearance, mobility, and a general state of well being. Last, forty-two patients (65%) reported the socially interruptive consequences of surgery as a stressful event.

Adolescents' satisfaction with hospitalization. Gusella et al. (1998) found that their participants reported visits from family and friends as the most important need (M=4.10, SD=.84), followed by education (M=4.09, SD=1.17), mobility and independence both with mean scores of 3.81 (S.D.=1.05), recreational activities (M=3.80, SD=1.07), and privacy (M=3.59, SD=.97). No score was given for meeting other teens that are in the hospital.

In the privacy section of the study, the participants reported being the most satisfied with privacy while using the toilet, bathing, or dressing (M=5.71, SD=1.48). The participants were most satisfied that visits were encouraged by staff members (M=5.55, SD=1.70) when questioned regarding visits with family and friends. The item with the most satisfaction among the activity items among all participants was that they perceived the staff cared about their recreational needs (M=5.41, SD=1.63). Among the subjects unable to be active, the item with the most satisfaction was that they knew how long their activity would be limited (M=5.29, SD=1.38). Regarding sense of control, the subjects indicated the greatest satisfaction with the ability to dress in their own clothes (M=6.43, SD=0.78). In an effort to maintain educational contact, the adolescents were most satisfied with their access to newspapers and magazines (M=5.33, S.D.=1.69). Overall, the adolescents reported an approval rating of their hospitalization experience as a mean score of 5.80 (SD=1.16).

When examining the results by groups based on age, sex, and chronicity, Gusella et al. (1998) did not find any difference among overall satisfaction in these areas. The authors did find that younger subjects (M=13.20 years, SD=0.88) placed greater importance on meeting others in the hospital than the older subjects (M=16.03 years,

SD=1.05) did ($t=2.28$, $p<.05$). The female subjects were older (M=14.95 years, SD=1.76) than their male counterparts (M=13.75 years, SD=1.39). Statistically significant differences were found among the importance of medical information between females and males ($t=2.05$, $p<.05$), satisfaction with phone privacy between males and females ($t=2.07$, $p<.05$), and satisfaction with school contact between females and males ($t=2.08$, $p<.05$). Last, those with chronic illness (M=14.73 years, SD=1.74) versus those with acute illness (M=13.55 years, SD=1.28) and reported statistically significant higher ratings for the important of mobility ($t=2.42$, $p<.05$), independence ($t=2.42$, $p<.05$), and medical information ($t=1.88$, $p<.05$). There was no statistical difference in overall satisfaction with hospital stay between the younger subjects and the older subjects, the males and the females, or the acute versus chronic patients.

Implications for Study

Since Child Life Specialists or disciplines other than nursing published most of the studies reviewed, this study broadened nursing knowledge regarding the developmental needs of adolescents while hospitalized. Furthermore, this study replicated the earlier investigation by Gusella et al. (1998) studying the importance of and perceived satisfaction of adolescents with their developmental needs during hospitalization.

Research Questions

In light of the review of literature, two research questions were posed for this study. First, "Which of the described developmental needs are most important to the hospitalized adolescent?" And second, "What is the perceived satisfaction among adolescents with developmental needs during hospitalization?"

Definition of terms related to research questions:

1. Adolescence: The period of time between ages twelve and eighteen characterized by rapid physical, emotional, and cognitive changes.
2. Developmental Needs: Five needs (privacy, mobility, independence, peer visitation and contact, and educational continuity) identified in the literature, believed by researchers to be essential and necessary to the adolescent during hospitalization.
    a. Privacy: The adolescent's need to maintain their identity and uniqueness during physical examinations and procedures, performing self-care routines (bathing, toileting, dressing), speaking to health care professionals, requesting time alone, visiting with friends, or talking on the phone.
    b. Mobility: The adolescent's need control energy input and output to allow physical movement within their hospital environment.
    c. Independence: The adolescents need to participate in and control their own care.
    d. Peer visitation and contact: The acknowledgement of the adolescent as a social being and the adolescent's need for social interaction and support.
    e. Educational continuity: The adolescents need to maintain educational contact and the ability of the staff to foster growth and learning in the hospitalized adolescent.
3. Admission Diagnosis: An alteration in health and/or functioning requiring hospitalization.

CHAPTER 3

METHODOLOGY

Study Design

A descriptive research design was used in this study to determine the importance of and level of perceived satisfaction adolescents had with their developmental needs during their hospitalization at a southwestern Michigan Children's Hospital. This design was selected because researcher or designee had access to the data collection site twenty-four hours a day, seven days a week. This facilitated contacting potential subjects and their parents.

Polit and Hungler (1995) state that the purpose of descriptive research is to, "summarize the status of phenomena of interest as they currently exist" (p. 184). As with all nonexperimental research designs, descriptive research does not have the power to make conclusions regarding cause and effect relationships.

Study Site and Subjects

This study was conducted at a southwestern Michigan Children's Hospital. This hospital has 38 licensed beds for general Pediatrics and 12 licensed beds for the Pediatric Intensive Care Unit (PICU). The hospital serves as a regional referral center for 17 area hospitals. Patients admitted to the pediatric unit range in age from 3 days old to 18 years old.

A non-probability convenience sample was utilized for this study. While thirty subjects were sought for the study, fifteen out of eighteen adolescents who met the

inclusion criteria completed the questionnaires at discharge. Subjects hospitalized more than once during the data collection period were only allowed to participate in the study once.

Adolescents meeting the following criteria were eligible for participation in this study. First, the adolescent had to be hospitalized with a medical or surgical diagnosis. All adolescents hospitalized with suicide intention or attempts (such as drug overdoses), anorexia, or altered mental status, due to drug or alcohol use or abuse, were excluded from the study. Second, the adolescent had to speak and read English. Third, the adolescent had to be cognitively capable of completing the survey. Fourth, the adolescent had to be hospitalized greater than 24 hours to allow the nurse time to assess the patient, build a relationship with the parents, assist in meeting the patient's developmental needs, and coordinate interventions with other disciplines such as Child Life Specialists. Fifth, the adolescent had to admitted to Pediatrics or Pediatric Intensive Care. Adolescents admitted to alternate departments such as Trauma Care, Orthopedics, or Adult Medical/Surgical was excluded. Sixth, parents or legal guardians had to give consent and then the adolescent had to give assent in order to participate.

Subjects ranged in age from twelve to eighteen years with a mean age of 14.87 years (SD=1.64 years). The subjects' grade in school ranged from sixth grade through eleventh grade with one subject (6.7%) in sixth grade, 2 subjects (13.3%) in seventh grade, 3 subjects (20%) in eighth grade, 5 subjects (33.3%) in ninth grade, one subject (6.7%) in tenth grade, and three subjects (20%) in eleventh grade. Sixty percent (n=9) of the subjects were male and forty percent (n=6) of the subjects were female.

When questioning subjects regarding their ethnic identity, subjects were able to choose more than one ethnic group with which they identify. Fourteen (93.3%) of the subjects chose to identify with the Caucasian/White ethnic identity. Two respondents (13.3%) identified themselves as African American and one respondent (6.7%) identified him/herself as Native American Indian. No respondents identified with the Hispanic, Asian American, or "other" ethnic groups. Seven (46.7%) of the subjects reported having a previous hospitalization in addition to their birth. Of those seven respondents, five respondents had hospitalizations in the twelve months preceding the study period. Eight (53.3%) of the subjects denied having a hospitalization other than their birth prior to the study period.

The average length of stay for the subjects was 5.14 days (SD=4.85 days), with one subject not reporting this information. When compared to all admissions in the pediatric department this is a relatively long length of stay. Twelve of the participants were hospitalized one to five days. One subject reported being hospitalized fourteen days and another eighteen days. The subjects were admitted under one of four broad admission diagnoses. Three subjects (20%) were admitted for diagnosis of, or complications arising from, Type I Insulin Dependent Diabetes Mellitus. Four subjects (26.7%) were admitted with diagnoses of a respiratory nature such as cystic fibrosis or asthma. Another four subjects (26.7%) were admitted with a surgical condition such as an appendectomy or an orthopedic procedure. Two subjects (13.3%) reported being admitted with an infectious process, either bacterial or viral. Last, one subject (6.7%) did not give his/her admission diagnosis, and one subject (6.7%) was unsure of his/her

diagnosis. Based on the admitting diagnosis and in compliance with hospital infection control policies, three subjects (20%) were placed in isolation.

Instruments

Data was collected using two instruments: (1) a demographic data questionnaire for adolescents (Appendix A), and (2) the Five Basic Needs Questionnaire (Appendix A) developed by Gusella et al. (1998). The demographic tool was developed by the researcher to collect general demographic data as well as information related to the reason for admission and number of previous admissions.

Permission for the use of the Five Basic Needs Questionnaire was obtained from the original author (Appendix B). The Five Basic Needs Questionnaire was originally administered to adolescents using either a hard copy of the tool or a user-friendly computer program. Gusella et al. (1998) felt that the computerized option provided the most successful way to elicit information from adolescents that may be sensitive. Most participants chose to complete the survey via computer. In this study, the tool was administered to participants in hard copy form.

The Five Basic Needs Questionnaire was developed using the work of Denholm and Ferguson (1987) as a framework. The questionnaire measures both overall importance for each of the five basic developmental needs and perceived satisfaction with the five basic developmental needs during hospitalization. It has 37 items grouped into seven subcategories. The first subcategory ranks in the importance of the five basic developmental needs. Each subcategory following measures perceived satisfaction with each developmental need and then an overall satisfaction score. After each category, the

participant has the opportunity to give suggestions in narrative form for how that need could be met.

Each item in the tool is measured on a Likert scale. The first section, importance of the five basic developmental needs, contains eight items and is measured on a one (not at all) to five (very important) scale with a higher score indicating greater importance. The remaining six sections measuring satisfaction are measured on a one (not at all satisfied) to seven (very satisfied) Likert scale. Again, the higher score in these sections indicates greater perceived satisfaction. The privacy and family/friend visitation sections each contain six items. There is an additional question requiring a yes or no answer within the privacy section regarding if the subject had a roommate. The activity section contains a total of seven questions with three general questions and four aimed specifically at patients with limited mobility. The sense of control section contains five items and the education section contains three items. The last item is an overall satisfaction question, again measured on a one to seven Likert scale with a higher score indicating a greater perceived satisfaction. The Five Basic Needs Questionnaire is scored by adding the responses for each of the items and then dividing by the number of responses, therefore obtaining a summative mean. The summative mean can be ranked and ordered by order of importance or perceived satisfaction for the individual question or item.

Gusella et al. (1998) did not report a Cronbach's alpha as a measure of reliability. They did report an internal consistency correlation between ratings made on individual questionnaire items and the questionnaire subscale total scores to which the item contributed. The authors reported their correlations between .43 and .88. According to

Polit and Hungler (1995), when a researcher is interested in making group level comparisons, a coefficient of .60 to .70 is sufficient.

In this study, the reliability coefficient for perceived satisfaction with education was .89 (n=11). The coefficients for perceived satisfaction with sense of control was .84 (n=13) and for perceived satisfaction with activity was .81 (n=11). The reliability coefficient for privacy was .80 (n=15). When calculating the reliability coefficient for perceived satisfaction with visits, the original score with all items considered was .28 (n=12). However, when the sixth item was eliminated, "The hours for the playroom were long enough", the reliability coefficient increased to .59. Last, the reliability coefficient for the importance of the basic needs was calculated as .57 (n=12).

Procedure

Permission was obtained from Grand Valley State University Human Subjects Committee and the Human Use Committee at the southwestern Michigan Children's Hospital (Appendix C). The researcher or designee contacted each adolescent, who met the eligibility criteria, and the adolescent's parent or legal guardian. Every effort was made by the researcher to conduct the consent process.

Each subject and their parent or legal guardian were contacted to obtain first parental/guardian consent and then adolescent assent for participation in the study (Appendix D). In the event that a parent or legal guardian was not present to give consent, the researcher or designee attempted to reach them via telephone. In this case, a second Registered Nurse was available to witness this consent process. This process was similar to the telephone consent process currently in place at this institution.

All potential participants and their parents or legal guardians were told that the purpose of this study was to measure the importance of and the perceived satisfaction with the five basic developmental needs during hospitalization. A script for approaching subjects was read to each potential participant and the parent or legal guardian. The researcher was identified as a graduate nursing student from Grand Valley State University (Appendix D). All participants were informed that participation was completely voluntary and that confidentiality, as well as anonymity would be maintained throughout the study. In addition, participants were informed of the estimated amount of time required to complete the questionnaire, that they could discontinue their participation in the study at any time without consequences, only group data would be used in reports generated from this study, and all questions were answered prior to obtaining consent and assent for participation in this study. Each participant was given a signed copy of the consent form, including the name and telephone number of the researcher.

Participants were then instructed to complete the questionnaire on the day of discharge, place the completed questionnaire in the provided, numerically coded manila envelope, and return the sealed envelope to the front desk staff or Registered Nurse. Participants whose parents consented and themselves assented to the study had reminder stickers placed in the discharge planning section of their chart for the discharge Registered Nurses to remind the participant to complete the questionnaire prior to discharge.

Benefits and Risks to Subjects

The participants did not receive any direct benefit from their participation in this study. The subjects, however, may have appreciated the opportunity to give their opinions regarding their hospitalization. The risks of participation were also minimal; physical or emotional exhaustion from completing the questionnaire. In the event that the subject may have been unable to complete the questionnaire at discharge, they were encouraged to not participate.

CHAPTER 4

RESULTS

The purpose of this study was to measure both the importance of the developmental needs and the perceived satisfaction among hospitalized adolescents with their developmental needs during hospitalization. Data analysis was completed using the Statistical Package for the Social Sciences (SPSS/WIN+) software.

Research Question

The review of literature suggests that adolescence is a unique developmental stage. The review of literature describes both positive and negative hospitalization experiences. This study was developed to build upon prior research as well as attempt to replicate the original work by Gusella et al. (1998).

The research questions established for this study were: (1) which of the described developmental needs is most important to the hospitalized adolescent (2) what is the perceived satisfaction among adolescents with their developmental needs during hospitalization?

Analysis

Importance of the basic needs. The mean scores for the importance of each of the eight basic needs items were calculated. The item found to be most important to the study participants was "Medical Information" with a mean score of 4.33 (SD=.82). Participants reported that meeting other teens who are in the hospital ranked as the least

important of the needs during hospitalization with a mean of 2.27 (SD=.96). The importance ranking of the items in this section is presented in Table 1.

Table 1

Adolescents' Ranking of the Importance of the Developmental Needs

Developmental Need	Mean	Standard Deviation
Medical Information	4.33	0.82
Mobility	4.20	0.68
Visits from friends and family	4.20	0.77
Independence	4.07	0.70
Privacy	3.87	0.92
Education	3.64	1.22
Recreational Activities	3.42	1.31
Meeting other teens who are in the hospital	2.27	0.96

Privacy. The overall mean perceived satisfaction score among the six items for privacy was 6.19 (SD=49). Participants noted the most satisfaction with privacy when using the toilet, bathing, or dressing (M=6.47, SD=.52). Participants noted the least satisfaction with privacy when talking on the phone with a mean score of 6.07 (SD=0.70). None of the participants reported having a roommate during their hospitalization. The level of perceived satisfaction with the other privacy items is presented in Table 2.

Table 2

Perceived Satisfaction with Privacy

Privacy Item	Mean	Standard Deviation
When using the toilet, bathing, or dressing	6.47	0.52
During visits from family and friends	6.20	0.68
During physical examinations or procedures	6.20	0.70
When you were alone	6.13	0.52
When talking about your medical condition with a nurse or doctor	6.07	0.88
When talking on the phone	6.07	0.70

Participants were asked for feedback regarding "How could privacy be improved?" Ten of fifteen subjects provided feedback. Four subjects saw no room for further improvement. Two subjects requested that blinds be put on the windows or that the blinds that were there worked properly. Two subjects requested further privacy during visits from family and friends. One subject felt that a "Please do not disturb" sign for the doors would be helpful and another thought that less noise through the door would be beneficial.

Visits with family and friends. The overall mean perceived satisfaction score for the six questions regarding visits from family and friends was 5.38 (SD=.66). The item with which the participants reported being most satisfied with was having help explaining their medical condition to family and friends (M=5.87, SD=1.13). Overwhelmingly last, the respondents reported the least satisfaction with the length of the

playroom hours (M=4.25, SD=1.91). The level of perceived satisfaction with all the items regarding visits from family and friends is listed in Table 3.

Table 3

Perceived Satisfaction with Visits with family and friends

Visits item	Mean	Standard Deviation
You have help, if you need it, to explain your medical condition to family and friends	5.87	1.13
Visiting hours are flexible and long enough	5.67	1.18
Visits were encouraged by hospital staff	5.67	0.98
There is a comfortable spot to meet with visitors	5.47	1.06
There are things to do with your friends	5.13	1.51
The hours for the playroom are long enough	4.25	1.91

The participants were also given a chance to provide feedback regarding how visits and the playroom could be improved. Eleven out of fifteen subjects responded. Six subjects requested longer hours for both the playroom and visitation. Four subjects reported not using the playroom. One subject was unsure how improvements could be made.

Activity/Mobility. The activity/mobility section of the instrument contained seven questions. Three of the questions were to be answered by each participant. The remaining four questions were only to be answered by those participants who had limited mobility. Thirteen out of fifteen participants (87%) answered all seven questions. Of all the participants, the item which had the highest satisfaction was having the opportunity to be as active as their condition allowed them to be (M=6.27, SD=.88). Of the thirteen

participants who were unable to be active, the item that received the highest satisfaction rating was limitations to activity have been explained (M=5.69, SD=1.25). The level of perceived satisfaction with all the activity/mobility items for the fifteen participants is found in Table 4 and for the thirteen immobile participants is found in Table 5.

Table 4

Perceived Satisfaction with Activity/Mobility

Activity/Mobility Item	Mean	Standard Deviation
That you have the opportunity to be as active as your condition allows you to be	6.27	0.88
With the recreational facilities at the hospital	6.07	1.07
The staff care about your activity needs	5.60	1.72

Table 5

Perceived Satisfaction with Activity/Mobility by those who are Immobile

Activity/Mobility Item	Mean	Standard Deviation
Limitations to activity have been explained	5.69	1.25
You know how long your activity will be limited	5.58	1.00
Family and friends have been taught to help you get around	5.38	1.26
You have been taught to use any aide you need to help you get around	5.31	1.80

Six of the fifteen subjects provided feedback regarding how opportunities for recreational activities could be improved. Three reported that they did not participate in any activities. One subject reported that there was no room for improvement and another suggested that a cart with books, puzzles, or games be available for patients "who are

stuck in their room". Last, one subject reported that the only way recreational activities could be improved was if he/she could walk.

Sense of Control/Independence. The overall mean perceived satisfaction score for five items regarding sense of control/independence was 6.08 (SD=.89). The item respondents reported most satisfaction with having easy access to a phone (M=6.33, SD=.90). The participants reported having the least satisfaction with being involved in planning their care while in the hospital (M=5.71, SD=1.38). Perceived satisfaction for sense of control/independence is listed in Table 6.

Table 6

Perceived Satisfaction with Sense of Control/Independence

Sense of Control/Independence item	Mean	Standard Deviation
You have easy access to a phone	6.33	0.90
You have access to TV, books, and music	6.21	0.89
You have access to your personal grooming accessories	6.07	1.16
You have the opportunity to dress in your own clothes	6.07	1.39
You have been involved in planning your care while in the hospital	5.71	1.38

Seven out of fifteen subjects provided feedback on how their sense of control/independence could be improved. One subject requested more TV stations and a radio, while another requested to have more voice in the food choices. One subject requested both being able to dress in his/her own clothes and being consulted more often regarding care planning. Last, one subject reported that "Everyone made sure that I had a say in what was going on". Three subjects reported, "I don't know".

Education. The overall mean perceived satisfaction score for the three items regarding education was 5.56 (SD=1.27). The item the participants reported being most satisfied with was having a comfortable, quiet spot to do school work (M=5.77, SD=1.24). Again, educational items ranked by perceived satisfaction can be found in Table 7.

Table 7

Perceived Satisfaction with Education

Education Item	Mean	Standard Deviation
You have a comfortable/quiet spot to do school work	5.77	1.24
You have access to material needs to do your school work	5.58	1.31
You are encouraged by the hospital staff to maintain contact with your school	5.31	1.70

Six subjects responded to the question "How could your educational needs be improved?" with additional feedback. Three subjects were unable to identify any further interventions. Two subjects requested additional accommodations such as a desk, lamp, table, or study room. One subject reported not having to do any schoolwork.

Overall. At the end of the questionnaire the participants were asked to report their overall satisfaction with their hospital experience. The mean score for this overall perceived satisfaction was 6.27 (SD=.46).

CHAPTER 5

DISCUSSION AND IMPLICATIONS

This study identified which of eight needs were the most important to adolescents during their hospitalization and measured the perceived satisfaction of five of those needs. The adolescents perceived medical information as the most important need during their hospitalization (M=4.33). The next most important needs were mobility (M=4.20), visits from family and friends (M=4.20), independence (M=4.07), privacy (M=3.87), education (M=3.64), and recreational activities (M=3.42). Least important was the need to meet other teens while hospitalized (M=2.27).

When reporting satisfaction with the five developmental needs, the participants reported the most perceived satisfaction with privacy when using the toilet, bathing, or dressing and the least with privacy when talking on the phone. The participants reported the most perceived satisfaction with visitation when explaining their medical condition to family and friends, and the least with the playroom and visitation hours. With regard to activity and mobility, the participants reported the most perceived satisfaction with being as active as their condition allowed them to be, and the least with their perception that the staff cared about their activity needs. In the sense of control/independence category, the participants reported the most satisfaction with having easy access to a phone, and the least with being involved in planning their own care while hospitalized. Last, with regard to education, the participants reported the highest level of satisfaction with having a comfortable/quiet spot to do school and work and the least satisfaction with the

perception that they were encouraged by the hospital staff to maintain contact with their school. Overall, the participants reported a high level of satisfaction with their hospitalization. When presented with an opportunity to provide feedback regarding their experience, many participants chose to do so.

Relationship of Findings to the Conceptual Frameworks

Piaget. Piaget's framework was supported in this research. Piaget's work suggests that adolescents are egocentric. This was evident in the questionnaires' responses as teens in both this study and in the original study ranked meeting other teenagers who are in the hospital lowest in the importance of the basic needs section of the tool. In addition to egocentrism, Elkind discussed imaginary audience. Consistent with the concept of imaginary audience, a number of participants proposed ways in which their hospital experience could have been improved. Contrary to this concept of self-consciousness and self-admiration, it is surprising to find that privacy rated fifth in importance out of eight basic needs statements.

Piaget also predicts that as adolescents enter formal operational thought, they become able to think about changes that come with time, hypothesize about logical sequences of events, and understand consequences of actions. In agreement with these cognitive changes, the adolescents in the study indicated that the most important need to them during their hospitalization was medical information. Adolescents entering formal operations are more able to understand the consequences and implications of medical information than their concrete operational counterparts.

One barrier to applying Piaget's framework to the participants in this study is the low mean age of the participants, 14 years. Piaget predicted that the transition to formal

operational thought begins between the ages of 11 to 15 years and is very variable regarding when the transition from concrete operational thought is complete. Concrete operational thinkers are much more concrete in their thinking and may not be as capable of answering a questionnaire and hypothesizing about potential changes to their hospital environment.

Levine. The adolescent participants in this study supported Levine's belief that nursings' focus should be the whole person and the goal of nursing interventions is conservation. First, as evident in Table 1, the mean scores among the importance of the developmental needs, with the exception of meeting other teens who are in the hospital, all fell within the "neutral" and "important" categories. This supports the finding that the developmental needs are of nearly equal importance to the participants, and therefore, as demonstrated in Figure 1, each of the conservation principles is, of equal importance to the conservation of the whole person. The conservation of structural integrity was not measured as a study variable, since it was the admission diagnosis that brought the patient to the hospital.

The ability to be active, according to Levine in her conservation of energy, requires the proper balance of energy input and output. The patients in this study reported the highest perceived satisfaction with the ability to be as active as their condition allowed them to be. In the evaluation phase of the nursing process, using Levine's framework, the nursing interventions regarding this conservation principle would be judged as effective.

The conservation of personal integrity involved privacy and independence/sense of control. Overall, the participants reported a great deal of satisfaction with their

privacy. Levine's theory predicts that this privacy was important as violation of a patient's privacy leads to dependence. Levine's theory, however, would not predict that the adolescent participants' would have ranked, "You have been involved in planning your care while in the hospital", as the least satisfied among the sense of control/independence items. Also, the participants reported less overall satisfaction with the sense of control/independence items than the privacy items. Levine's theory warns that this loss of control also leads to a dependent, less able to conserve, state.

The conservation of social integrity involved visits from family and friends and educational continuity. Participants reported a similar level of high satisfaction with each of these items. The item that received the highest satisfaction score between the two categories was, "You have help, if you need it, to explain your medical condition to family and friends". Levine's model finds this important as it is the social community to which a patient belongs that helps the patient define beliefs regarding healthcare and will eventually care for the patient once discharged.

Relationship of Findings to Previous Research

There were several similarities and differences between this study and the original study by Gusella et al. (1998). In ranking the overall importance of the basic needs, the participants in the original research indicated that visits from friends and family was the most important, followed by education and medical information. Both this study and the original study agreed that meeting other teens that are in the hospital ranked low in importance.

The participants in both studies expressed the most satisfaction with privacy when using the toilet, bathing, or dressing. Both sets of participants expressed the least

satisfaction with privacy while using the telephone. The original authors did not question the participants whether they had a roommate during their hospitalization.

In this study, the participants were most satisfied with having help explaining their medical condition to family and friends. This ranked second in satisfaction in the original study. Both studies found the participants agreed the hours for the teen lounge/playroom were not long enough.

When comparing the results for activity, it is important to note that 87% of the participants in this study felt that their condition did not allow them to be active/mobile. In the original study only 41% of the respondents classified themselves as unable to be active/mobile. The original authors did not give a definition for immobility, and in this study the participants were given the freedom to interpret immobility individually. This may have affected the number of participants who classified themselves as immobile. The participants in the original study were the most satisfied that the staff cared about their activity needs, while this item ranked last among the sample for this study. Among those unable to be active, both studies' participants were the least satisfied with knowing how to use any assistive mobility devices and that friends and family members were taught to assist with mobility.

The participants in both studies reported the least satisfaction in the sense of control portion of the study with being involved in planning their own care while hospitalized. The subjects in this study reported more satisfaction with access to phones and televisions while the original study participants reported more satisfaction with access to personal items such as clothing.

When comparing the results for education, both studies' participants found the least satisfaction with being encouraged by the hospital staff to maintain educational continuity. This studies' participants reported the most satisfaction with having a quiet place to do homework. With regard to interpreting the scores for education, it is important to note that some of the data for this study was collected during summer months, potentially influencing results in this category. Overall, the subjects in this study reported a greater level of satisfaction with their hospitalization than the original study.

There may be many reasons for the differences and similarities in the findings. In the original research, subjects were contacted after their discharge to complete the tool, potentially influencing their ability to remember hospital events and perceptions. To minimize this risk, the patients in this study completed the instrument prior to being discharged from the hospital. The mean age of the participants was similar, however, the original study had a greater percentage of female participants potentially affecting the results. Also potentially affecting the results, the original study had almost twice the number of patients hospitalized with chronic conditions, therefore, affecting the results and potential expectations of the hospitalization. The original study was conducted at a 200-bed pediatric only hospital where adolescents were grouped according to diagnosis, not age. At this study site, patients were grouped by age, not diagnosis, therefore putting all the adolescents on one hospital floor. A pediatric-only hospital should have a stronger, more significant pediatric focus and philosophy, especially by the ancillary departments such as radiology and laboratory than a hospital that provides care to patients throughout the lifespan. It is not known if the original study site also served as a

teaching institution. Last, the sample size of the original study 69, making it much more powerful in explaining results.

This study is both consistent and inconsistent with other previous research. Honig's (1982) writing would have predicted that the overall importance of privacy would have been much higher to the participants than it actually was. Honig's (1982) writing does support the overall importance of mobility to the participants. Honig's writing is also consistent with this study in finding concerns voiced about telephone use and visitor restrictions. The mean age of participants in Stevens' study (1986) and this study were similar, likely supporting the high ranking of the importance of visitation to the participants. The high ranking of the importance of visitation is also consistent with Miller et al.'s (1998) study indicating a preference by the adolescents for companionship while hospitalized. This study could neither support nor refute Schowalter and Lord's (as cited in Denholm, 1985) finding that adolescents prefer their parents as visitors versus their peers. While the study did find that visitation from family and friends was important to teens, the tool did not distinguish importance of family visitation versus peer visitation.

Study Limitations

A major limitation to this study was sample size. The sample size was smaller than those reviewed in the literature. The subjects comprised a small convenience sample that made group comparisons by age, sex, and chronicity, as in the original study by Gusella et al. (1998) impossible. The smaller sample size also may have affected the reliability coefficients for the Five Basic Needs Questionnaire. In addition, eighteen subjects who met the inclusion criteria for the study were approached and fifteen subjects

actually completed the questionnaires at discharge. The responses of those three participants may have been different, influencing the results.

This study measured perceived satisfaction among adolescents. Perceptions change over time. Adolescents upon admission may have felt too overwhelmed with their illness and hospitalization to accurately report the importance of and their level of satisfaction with developmental needs during hospitalization. To minimize this problem, adolescents were instructed to complete the questionnaire on the day of discharge as a summary of their entire hospitalization.

Another limitation of this study was the design. First, descriptive designs are the least powerful method of research and are not capable identifying cause and effect relationships among the data. Second, self-reported data among adolescent subjects was used. This may not always be the most accurate form of data collection as the participants may have been hesitant to respond in a truthful manner. To reduce this risk, participants were repeatedly informed that all responses were confidential, therefore attempting to reduce hesitancy of the participant to be truthful.

Given the descriptive design of this study and the very small sample size, there are inherent threats to internal validity. When considering the threat of history, it is interesting to note that during the study period the study site hired an additional Child Life Specialist and expanded playroom hours. It is not known at what point in the data collection this occurred and the small sample size prohibits any group comparison to assess the outcomes of this intervention. This intervention, however, may have influenced results. The use of convenience sampling versus random sampling has potential effects on internal validity. This is particularly evident given the high mean

length of stay. Instrumentation may also affect internal validity, as the tools were rather long and the questions very similar. This could have caused participant fatigue or boredom, thereby affecting results.

Since the sample was homogenous by race and had a relatively low mean age of participants, the external validity of this study may also brought into question. In addition, adolescents may have responded in a less than truthful manner as a result of knowing they were included in a study. Last, the researcher may have portrayed a bias to the participants while conducting the consent/assent process, therefore altering the results.

Implications for Nursing

Based upon findings of this and previous research, nursing practice must consider the unique developmental needs of the adolescent and seek to collaboratively meet those needs within the framework of Piaget's Cognitive Development Model and Levine's Conservation Model. Of particular interest to nursing practice, the participants in this study ranked medical information as the most important need during their hospitalization, while they reported the least satisfaction with their involvement in planning their own care. This finding presents nursing with an opportunity to provide education to adolescents related to their health condition, as well as serve as an advocate for adolescents as they seek medical information from other health care professionals. Since nurses spend a majority of their day planning patient care with other disciplines such as physical therapy, Child Life Specialists, and Care Coordinators, the need for adolescents to be active participants in their care cannot be overlooked. If feasible,

adolescents should attend their own multidisciplinary care conferences and be provided an opportunity to give input.

The study participants reported a great deal of satisfaction with explaining their medical condition to family and friends, encouraging nurses to continue teaching and educating not only the patient, but the family as well as the entire social context of the patient. The study participants also reported a great deal of satisfaction with privacy while using the toilet bathing, or dressing. This should encourage nurses to continue to respect the self-conscious adolescent patient during these vulnerable times.

The participants reported the least satisfaction that they perceived the staff cared about their activity needs and that they have been taught to use any mobility aides. While adolescent egocentrism may have influenced this response and others, it is important that nurses are aware that participants ranked mobility/activity second in importance.

The participants also reported the least satisfaction that they perceived the staff encouraged them to maintain contact with their school. It should be noted that some of the data collection occurred during the early summer when participants would not be in school. While education was ranked sixth among importance of the needs, it is important to remember that seven of the needs were closely ranked and in Levine's model, no conservation principle is more important than the others. It is important that nursing not give the impression that educational continuity is not important as education plays a large role in the life of an adolescent.

Again, this study found that adolescents perceive medical information as the most important of the developmental needs identified. Kowpak (1991) found a large discrepancy between health care providers' perception of adolescents' health concerns

and adolescents' actual health concerns. This makes open, honest communication between pediatric nurses in either general practice or advanced practice a necessity to be sure that actual health concerns are being met with the proper information.

Farrelly (1994) hypothesized that patients given a greater sense of control regarding their care may recover quicker. This hypothesis has financial implications for hospitals and they seek new ways to reduce the length of stay.

This study also has implications for nursing education. Adolescent development is unique and has profound implications for providing proper care. An understanding of the importance of development and developmental needs is crucial for nurses as they enter practice. It is important for nursing education to educate students regarding adolescent development from a variety of developmental and nursing frameworks. This study also illustrates the importance of an approach beyond what may be traditionally considered "holistic" with the care of adolescents. Reinforcing the need for the nurse to assess the energy exchange, structural integrity, personal integrity, and social integrity of the adolescent patient is important.

Last, this study has implications for nursing administrators. As technology advances, worldwide websites are being constructed for hospitalized teenagers to "chat" with other hospitalized teens. The participants in this study ranked meeting other teens that are hospitalized as the least important of the developmental needs. Perhaps instead, administrators could recognize that adolescents who are hospitalized are more interested in development of the recreational activities in their own hospitals and the resources used to buy computer software and hardware could instead be used to expand playroom hours and recreational resources for immobile patients. In addition, strong and effective

administrators often play an integral role in inspiring a patient care vision that is developmentally friendly to adolescents. This can be implemented by encouraging staff to attend advanced training in adolescent development, encouraging ancillary departments that provide services to patients throughout the lifespan to implement developmentally friendly policies, recognizing the important role of Child Life Specialists, providing an appropriate patient to staff ratio, and revisiting some of the unit policies, such as flexible playroom and visitation hours.

Future Research

There are several areas of study that could be expanded from this study both by nursing and other disciplines. First, given the small sample size, this study could serve as an excellent pilot study for further replication with a larger sample size, allowing for comparisons by age, sex, and chronicity. Also, to further support or not support Denholm's (1990) work, studies could be conducted both in the hospital and as a follow-up to hospitalization to measure the changes in perceptions over time. Denholm was also one of very few authors that have done any longitudinal studies with a period of more than a month to assess long-term implications of hospitalization.

As stated earlier, there have been very few adolescent hospitalization satisfaction studies. This is important for researchers to investigate as both the positive and the negative effects of hospitalization have been discussed. Also, the results of this study support that medical information is most important during hospitalization; however, medical information is not listed as one of the original five basic developmental needs of hospitalized adolescents. More research is needed regarding the existence of the above-mentioned five basic needs of hospitalized adolescents plus the likelihood that other

needs may exist. The data collection tool could then be modified to more accurately measure the importance of and satisfaction with all the developmental needs.

This study was conducted in a PICU/pediatrics department. Smaller hospitals without pediatric departments or larger hospitals who occasionally admit adolescents to adult units for various reasons would serve as good comparison sites and studies for the effects of specially trained nurses and staff and the pediatric environment on the level of perceived satisfaction the adolescents have with their developmental needs during hospitalization.

The hypothesis by Farrelly (1994) also presents some interesting study topics regarding a potential relationship between increased sense of control regarding care and decreased length of hospital stay. If a relationship is found, this could have implications on the way care is currently delivered in many inpatient settings.

In conclusion, this study sought to expand knowledge of the adolescent patient during hospitalization. This study serves as an excellent pilot study for further, much needed, research in this area. The results of this study offer both encouragement for nurses in their practice and challenges for the future of the profession. In addition, the results of this study have implications for all professionals as they work together to meet the needs of the unique adolescent patient.

APPENDICES

APPENDIX A

DATA COLLECTION TOOLS

ID# ____

Demographic Data Sheet

What is your age in years? _____ (round to the nearest year).
What was your grade in school? _____.
Are you male or female? _____.

With which ethnic groups do you most closely identify:

1. Caucasian/White Descent
2. African American
3. Hispanic American
4. Native American Indian
5. Asian American
6. Other

Besides being born, have you ever spent the night in the hospital?

1. Yes
2. No

How many times were you hospitalized over night in the last 12 months? _____.

Why are you hospitalized this time?

At any time in your hospitalization were you placed in isolation as a result of your diagnosis or treatment?

1. Yes
2. No

How many days were you hospitalized during this admission? _____

ID# ____

FIVE BASIC NEEDS QUESTIONNAIRE:

The following is a brief questionnaire that will ask you questions regarding your hospitalization. Please answer as honestly as you are able. If you are unable to answer a question, simply leave it blank.

Please indicate how important each of the following is to you during your hospital stay using the rating scales below. Circle the number corresponding to your importance rating for each item.

How important to you is your need for:

	Not at all	Not very important	So-So (Neutral)	Important	Very Important
Privacy	1	2	3	4	5
Visits from friends and family	1	2	3	4	5
Being able to get around	1	2	3	4	5
Being independent	1	2	3	4	5
Education	1	2	3	4	5
Recreational Activities	1	2	3	4	5
Meeting other teens who are in the hospital	1	2	3	4	5
Medical information	1	2	3	4	5

I would like to know how satisfied you are with aspects of your care while in the hospital. Please indicate your satisfaction rating using the rating scale below. Circle the number corresponding to your level of satisfaction for each item.

Privacy:

How satisfied are you that you get enough privacy:

	Not at all (1)	**Dissatisfied (2)**	**Somewhat dissatisfied (3)**	**Neutral (4)**	**Somewhat satisfied (5)**	**Satisfied (6)**	**Very Satisfied (7)**
When you were alone	1	2	3	4	5	6	7
During visits from family and friends	1	2	3	4	5	6	7
When using the toilet, bathing, or dressing	1	2	3	4	5	6	7
When talking on the phone	1	2	3	4	5	6	7
When talking about your medical condition with a nurse or doctor	1	2	3	4	5	6	7
During physical examinations or procedures	1	2	3	4	5	6	7

How could privacy be improved?

Did you have a roommate?

1. Yes
2. No

Visits with family and friends:

How satisfied are you that:

	Not at all (1)	Dissatisfied (2)	Somewhat dissatisfied (3)	Neutral (4)	Somewhat satisfied (5)	Satisfied (6)	Very Satisfied (7)
Visits are encouraged by hospital staff	1	2	3	4	5	6	7
Visiting hours are flexible and long enough	1	2	3	4	5	6	7
There is a comfortable spot to meet with visitors	1	2	3	4	5	6	7
There are things to do with your friends	1	2	3	4	5	6	7
You have help, if you need it, to explain your medical condition to family and friends	1	2	3	4	5	6	7
The hours for the playroom are long enough	1	2	3	4	5	6	7

How could visits and the playroom be improved?

Activity:

How satisfied are you that:

	Not at all (1)	Dissatisfied (2)	Somewhat dissatisfied (3)	Neutral (4)	Somewhat satisfied (5)	Satisfied (6)	Very Satisfied (7)
With the recreational facilities at the hospital	1	2	3	4	5	6	7
That the staff care about your activity needs	1	2	3	4	5	6	7
That you have the opportunity to be as active as your condition allows you to be	1	2	3	4	5	6	7

If you are not able to be active, how satisfied are you that:

	Not at all (1)	Dissatisfied (2)	Somewhat dissatisfied (3)	Neutral (4)	Somewhat satisfied (5)	Satisfied (6)	Very Satisfied (7)
Limitations to activity have been explained	1	2	3	4	5	6	7
You know how long your activity will be limited	1	2	3	4	5	6	7
You have been taught to use any aide you need to help you get around	1	2	3	4	5	6	7
Family and friends have been taught to help you get around	1	2	3	4	5	6	7

How could your opportunities for recreational activities be improved?

Sense of control:

How satisfied are you that:

	Not at all (1)	Dissatisfied (2)	Somewhat dissatisfied (3)	Neutral (4)	Somewhat satisfied (5)	Satisfied (6)	Very Satisfied (7)
You have easy access to a phone	1	2	3	4	5	6	7
You have access to TV, books, and music	1	2	3	4	5	6	7
You have the opportunity to dress in your own clothes	1	2	3	4	5	6	7
You have access to your personal grooming accessories	1	2	3	4	5	6	7
You have been involved in planning your care while in the hospital	1	2	3	4	5	6	7

How could your sense of control be improved?

Education:

How satisfied are you that:

	Not at all (1)	Dissatisfied (2)	Somewhat dissatisfied (3)	Neutral (4)	Somewhat satisfied (5)	Satisfied (6)	Very Satisfied (7)
You are encouraged by the hospital staff to maintain contact with your school	1	2	3	4	5	6	7
You have a comfortable/quiet spot to do school work	1	2	3	4	5	6	7
You have access to materials needed to do your school work	1	2	3	4	5	6	7

How could your educational needs be improved?

Overall:

How satisfied are you with your hospital experience:

	Not at all (1)	Dissatisfied (2)	Somewhat dissatisfied (3)	Neutral (4)	Somewhat satisfied (5)	Satisfied (6)	Very Satisfied (7)
	1	2	3	4	5	6	7

APPENDIX B

LETTER OF PERMISSION TO USE TOOL

Jaclynn L. Lubbers
284 Palms Street SW
Grand Rapids, MI
USA
49548

November 3, 1999

Dear Jaclynn Lubbers

I'm sorry that it has taken me a while to get back to you. You have my permission to use the Five Basic Needs Questionnaire as long as you reference the authors of the questionnaire as Joanne Gusella, Anne-Marie Ward and Gordon S. Butler (1998), the same as the article "The Experience of Hospitalized Adolescents: How well do we meet their Developmental needs?". We wish you all the best in your research, and would like to know about your results when they are available.

Sincerely,

Joanne Gusella, Ph.D.
Clinical Psychologist

APPENDIX C

LETTER OF PERMISSION TO CONDUCT STUDY

GRAND VALLEY
STATE UNIVERSITY

1 CAMPUS DRIVE • ALLENDALE, MICHIGAN 49401-9403 • 616/895-6611

February 3, 2000

Jaclynn L. Lubbers
284 Palms St. SW
Grand Rapids, MI 49548

Dear Jaclynn:

Your proposed project entitled **Adolescents' Perceived Satisfaction with Their Developmental Needs During Hospitalization** has been approved as a study which is exempt from the regulations by section 46.101 of the Federal Register 46(16):8336, January 26, 1981.

Upon receipt of approval from the hospital, please forward a copy of the approval letter to Research & Development, 201 Lake Michigan Hall, Allendale, MI 49401. This letter will be placed in your project file.

Sincerely,

[redacted]

Paul A. Huizenga, Chair
Human Research Review Committee

APPENDIX D

SCRIPT AND CONSENT FORMS

Script to be used by Researcher (or Designee) when approaching potential study participants and parents/legal guardians

Hello! My name is Jaclynn Lubbers (I am the research designee of Jaclynn Lubbers) and I (she) am (is) a graduate student at Grand Valley State University. I (Jaclynn Lubbers) am (is) conducting a research study, which examines the developmental needs of adolescents during their hospitalization. I (she) am (is) looking for thirty families and adolescents/teenagers who will agree to participate in this study. My (her) study involves the completion of two short questionnaires on the day of discharge, which should take about ten minutes to complete. On the day of discharge, the questionnaires simply need to be completed, placed in a manila envelope that you can seal and returned to the front desk.

In order to participate in this study, I (she) will need permission from both the parent/legal guardian and the adolescent study participant. Will you be interested in participating?

Are there any questions you have regarding this study?

Do you have any questions regarding the consent process?

Parent or Legal Guardian and Adolescent Participation Consent Form

I understand that my adolescent (teenager), or the adolescent under my legal guardianship, is being asked to participate in a study involving his/her satisfaction with his/her developmental needs during hospitalization. I understand that my adolescent is being asked to participate because of his/her hospitalization during the study period.

I understand that my adolescent will be asked to answer printed questionnaires at discharge, which will take approximately 10 minutes. This information is used to describe the adolescents who participate in this study as well as answer the research question.

I understand there are few risks to my adolescent's participation in this study. In the event that my adolescent is too emotionally upset or physically exhausted to complete the questionnaires at discharge, their participation in the study can be terminated. My adolescent's care will not be affected by their participation in this study. In the event of any injury resulting from this study, there will be no compensation from the researcher, Jaclynn Lubbers, Grand Valley State University, or (study site).

I understand there is no direct benefit for my adolescent's participation in this study. The results from this study may help nurses and other health care professionals learn more about how to help adolescents during their hospitalization. There is no payment for participation in this study.

I understand that the information from this study will be stored in the investigator's research file and identified only by a code number. No names will ever be used, even if the information and results of this study are used for publication in the nursing, medical, or other health related literature. Only group data will be used in reports generated from this study.

If there are questions concerning my adolescent's rights as a research participant, I may contact the chairperson of the Grand Valley State University Human Research Review Committee, Professor Paul Huizenga at (616) 895-2472.

I understand that I, or my adolescent, may ask more questions about the study at any time. The investigator, Mrs. Lubbers, R.N., may be reached at 616-393-0166. I will receive a copy of this consent form.

I understand that my adolescent's participation is voluntary and that my adolescent or I may refuse to participate or may withdraw consent and discontinue participation in the study at any time without prejudice to my adolescent's present or future care.

I have read and I understand the consent form. Therefore, I agree to give my consent for my adolescent's participation in this research project, and my adolescent agrees to give his/her assent to participate as a subject in this research project.

(Adolescent)	(Date)
(Parent/Legal Guardian)	(Date)
(Principal Investigator/Designee)	(Date)

Family Acknowledgement

"I have been given an opportunity to ask questions regarding this research study, and these questions have been answered to my satisfaction. I understand that if I have any additional questions I can contact Jaclynn Lubbers at (616) 393-0166."

"In giving my consent, I understand that my child's participation in this research project is voluntary, and that I may withdraw him/her at any time without affecting my child's future medical care. I also understand that the investigator in charge of this study, with my child's welfare as a basis, may decide at any time that he/she should no longer participate in this study."

"In the event of physical injury or illness resulting from the research procedures, (study site) and/or the investigator, Jaclynn Lubbers, will provide or arrange to provide for all necessary medical care to help my child recover, but they do not commit themselves to pay for such care, or to provide any additional compensation. I also understand that neither (study site) nor the investigator, Jaclynn Lubbers, agree to bear the expense or medical care for any new illness or complications which may develop during my child's participation in this study, but are not a result of the research procedures. If I have further questions or concerns regarding my child's participation in this study, I may direct them to Jaclynn Lubbers at (616) 393-0166. If I have questions about research subjects' rights, I may direct them to James W. Carter, M.D., Chairman, (study site) Institutional Review Board at (616) 833-9448."

"I acknowledge that I have read and understand the above information, and that I agree to allow my child to participate in this study. I have received a copy of this document for my own records."

Signature of Patient	Date
Signature of Legal Guardian/Parent	Date
Signature of Legal Guardian/Parent	Date

If both parents/guardians do not provide informed consent for their child to participate in this study, please explain why: _____

"I have witnessed that the information in this Patient Consent Form was adequately explained to the patient."

Signature of Witness	Date

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