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# Parental Satisfaction in a Pediatric Intensive Care Unit

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PARENTAL SATISFACTION IN A PEDIATRIC INTENSIVE CARE UNIT

Thesis submitted to  
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Marshall University

In partial fulfillment of the  
Requirements for the degree of  
Master of Science  
Nursing

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*Abstract*

**Purpose:** The purpose of this study was to identify if the factors which indicate parental satisfaction of parents who have children admitted to the Pediatric Intensive Care Unit (PICU) were being attained. The research questions were: 1) Was there a relationship between healthcare environment and parent satisfaction; 2) Was there a relationship between patient care and parent satisfaction; 3) Was there a relationship between communication and parent satisfaction? Parental satisfaction will be defined as meeting the parent's perceived needs of the child and family during admission to the PICU (McPherson, 1999). This study used McPherson's Parental Satisfaction Survey (PSS). The conceptual framework for this study was based on Watson's Transpersonal Human Carative Factors.

**Design:** The PSS is a 24 question survey scored using a Likert scale and a socio-demographic survey that includes three open ended questions to indicate most liked and least liked aspects of the PICU admit and suggestions for improvement. Data for this survey will be collected within the months of March and May of 2003.

**Method:** Data was collected from 101 parents whose child received care in this Appalachian PICU. The PSS measured three domains of caring: (a) hospital environment, (b) patient care, and (c) communication.

**Findings:** The results of this study found very high correlations for hospital environment ( $r=.75$ ,  $p<.01$ ), patient care ( $r=.86$ ,  $p<.01$ ), and communication ( $r=.92$ ,  $p<.01$ ) indicating that there is a very high level of parental satisfaction in the PICU.

**Conclusion:** Watson's Theoretical Framework was used in this study to closely examine the inter-personal health care member to parent/patient interaction. This study has indicated a very high parental satisfaction correlation with hospital environment, patient care and communication administered in this facility. The results of the PSS report a Cronbach's coefficient alpha yielding  $\alpha=.89$ , indicating that the study is reliable. Continuing research is needed to discover and assess new aspects of parental satisfaction of patient care in the PICU.

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## *Chapter One*

The purpose of this study was to determine if the previously identified carative factors necessary for parental satisfaction of child care were met in this Pediatric Intensive Care Unit (PICU) parent sample. The study measures the four carative factors by utilizing the McPherson's Parent Satisfaction Survey (PSS) which was developed especially for the PICU environment at Baylor Children's Hospital in Houston, Texas in 1999.

### *Background*

In the United States (US), the pediatric medical services represent a \$55 billion per year business (Benner, 1999). The US children hospitals are in a unique position to obtain a large share of this specialized market and remain profitable in the uncertain future of American health care (Benner, 1999). A recent study has found that children's hospitals may not respond to market pressures the same way as general hospitals do. One reason may be due to the differences in mission and business relationships with other health care organizations (Patrick, 2003). In a free market, more competition may spur organizations to improve quality of care as a means to distinguish individual health care facilities (Benner, 1999). Additional portions of the pediatric health care market can then be attained with greater parental preference for child care. As a result, smaller PICUs must compete for pediatric customers by delivering more personal and state-of-the-art care while maintaining a higher level of parent approval of patient care than ever before (Patrick, 2003).

With the initial admission and assessment of the critically ill child hemodynamic stabilization, airway ventilation, and emergency medical management takes precedence over parental satisfaction. During this immediate phase of medical stabilization, a health care representative should be assigned to the parent to give direction and explanation about the care the child will be receiving (Benner, 1999). If a cardiac or respiratory arrest situation does occur, the parents should be allowed to observe with thorough second-to-second explanation of care as it is being provided to the patient (American Heart Association, 2002). In observing the critical care given, the parents are informed as witness for themselves, that everything possible was done for their child (Kirschbaum, 1999). It is only after the initial crisis period has been resolved that parent expectations of child care can be focused upon (Kirschbaum, 1999).

The day-to-day care is the time period perceived as when parental satisfaction needs should be addressed and fulfilled (Benner, 1999). Some components of the ideal environment for parental fulfillment of care expectations identified by Kirschbaum's study (1999) include open communication, receiving the best possible care for their child that is given by compassionate personnel, an open visitation for family members, and immediate parental notification of any changes in the child's condition (Scott, 1998). The health care team should also attempt to instill adequate levels of hope and faith to the parents and provide pastoral care when warranted (Kirschbaum, 1990).

Parents often judge satisfaction of care given to critically ill children by analyzing the attitudes of nurses and other members of the health care team

when the care is being rendered (Benner, 1999). Parents also measured patient care received by comparing the current care to previous care obtained in prior admissions (Oremann, 1999). Each hospital experience is unique to every individual and depends on many diverse factors. McPherson (2000) identified some of these factors as hospital length of stay and diagnosis, as well as individual personal dynamics of the situation (Oremann, 1999). Each parent had a personalized opinion regarding contentment of goal attainment and realistic outcomes for their child (Kirschbaum, 2000).

Parent involvement has been identified as a large determining factor for the parent satisfaction of child medical care (Meech-Maldonado, 2001). A recent study had shown that parents gain knowledge and understanding of the treatment plan only when the line of communication was open and information was freely shared between the family and the health care team (Azoulay, et al., 2001 & Meech-Maldonado, 2001). The result of this study showed that the trust in the health care team was strengthened when open communication existed (Meech-Maldonado, 2001).

### *Significance*

Conner & Nelson (1999), report that current national accrediting organizations such as the Magnet Hospital Association are now requiring standardized patient satisfaction levels to maintain national credibility. Additional studies have revealed that with increased parental satisfaction of child health care, litigation costs decrease (Lea, 1994): therefore, parent contentment of child care must be further measured and addressed. This study used the only tool

available that specifically evaluates the PICU environment and identified if the perceived needs of parents in this sample are being met. For the purposes of this study, hospital environment, patient care, and communication were evaluated to determine parent satisfaction of care in the PICU.

This study is important because there has never been a specific parent satisfaction survey conducted in this Appalachian PICU. Prior to this study parents rated the overall pediatric care as one unit; intensive care and general care are now sub-categorized for more specific evaluation of the two units. This study identified if the factors necessary for parental satisfaction were being delivered. Since this tool had never been used in an Appalachian setting the PSS was examined for its reliability in the sample.

#### *Problem Statement*

The purpose of this study was to determine if the parental satisfaction needs were met during their child's admission. Guardian needs of critically ill children must be identified, prioritized, and incorporated into the child's plan of care. The specific research questions of this study were:

1. What is the relationship between the hospital environment and parental satisfaction?
2. What is the relationship between patient/parent care and parental satisfaction?
3. What is the relationship between communication and parental satisfaction?

### *Operational Definitions*

The following operational definitions were used: Parental Satisfaction, Hospital Environment, Parent/Patient Care, and Communication.

Parental Satisfaction : Fulfilling the parent's positive expectations of the perceived factors of the child's care (McPherson, 1999). Parental satisfaction was the dependent variable and will be measured by the total scores in the PSS.

Hospital Environment: The aesthetic value of the environment in which care is given, including noise level, cleanliness, neatness, privacy, and confidentiality.

Patient Care: Physical care provided to the patient and the family by the nurse and other health care workers including caring, compassion, response time and recommendations.

Communication: Includes all exchanges of information between parent/child and the health care team; including health care provider's teamwork, appropriate answering of questions and including parental concerns being identified and appropriately addressed, and informing parents of upcoming treatments and results.

Guardian Needs: Individual characteristics of personalized care deemed necessary by parents and child care givers to ensure satisfaction of patient care (ie. calling the child by name when performing care, taking extra time to interact with child and explain procedures prior to initiation and informing parent of upcoming care prior to initiation).

### *Importance of Study*

Nursing Practice: Nursing practice is the way in which the patient interacts with the nurse concerning necessities, desires, and health decisions (Scott, 1998). Evidence based practice gives reliability to the nursing practice and by conducting studies such as this one, nurses can better understand and fulfill the needs of parents.

Parental dissatisfaction with medical care will result in the lack of creditability in the health care team. Care provided that is below the expected level often results in poor parental attitudes, negative public relations for the PICU, increased litigation and eventually lost revenue due to low patient census (Scott, 1998).

This Appalachian PICU is unique in that specialty units such as the PICU are typically located only at larger hospitals in metropolitan cities where resources are more readily available. However, even with the state-of-the-art care given at this facility, if the parent is not satisfied, the parent will transfer the child elsewhere (Kirschbaum, 1990). By identifying satisfaction needs of parents, the needs can be easily met, thus keeping the patient at the smaller facility and providing more personal care, closer to their home.

Nursing Administration: A previous study reported that increased parental liking and a positive environment resulted in a quicker recovery for the critically ill child (Kirschbaum, 1990). Improved outcomes also result in shorter lengths of stay for patients as well as reduced costs of care (Kirschbaum, 1990). The current average length of stay for this PICU facility was 6.7 days (PICU Budget

Analysis, 2002). In addition to reduced length of stays and decreased medical costs, a positive work atmosphere with increased employee job satisfaction was expected. As an additional bonus to nursing administration, Kirschbaum (1999) stated that when increased parent and employee satisfaction was accomplished, higher employee retention and parent satisfaction were reported.

Nursing Education: Schaffer, et. al. (2000), felt that PSS should be used for measurement over a specific time frame, to show opportunities for quality of care improvement. This study was important because it evaluated the changes in care and how parental satisfaction was affected through simple nursing measures. The results were used to educate the staff on those factors that parents' identified as supportive to the family.

When taking care of children, care will not be effective unless a holistic method is adopted and utilized (Lea, 1994). The holistic care can not be attained without the support of the parental factor (Watson, 1999). If the parent was not confident in the health care situation, the child did not feel safe and the ultimate therapeutic relationship did not occur (Schaffer, 2000). By utilizing this survey, identified nursing deficits such as communication and education were corrected and specifically focused upon to improve patient care.

### *Summary*

The researcher found that in doing the research for this study, there was a large paucity of information documented pertaining to parental satisfaction of patient care in the PICU. By utilizing the only tool published to measure parental satisfaction of the PICU, the level of parent satisfaction was determined. This

study also explored the tools accuracy by measuring the sub-scales of the tool as hospital environment, patient care and communication. After the tool was deemed reliable, the study then determined if parent satisfaction in this sample was obtained. By analyzing the results of the survey, the needs of the parents were more readily identified and met.

## *Chapter Two*

The purpose of this chapter was to provide a comprehensive literature review and incorporate the theoretical framework for the study. A review of the literature has indicated paucity in the specific research pertaining to the parental satisfaction of care in the PICU. A computer search of current literature was conducted with the following results obtained.

### *Literature Review*

Scott (1998) conducted a descriptive study in a Pediatric Intensive Care Unit (PICU) in a Midwestern hospital in which the needs of parents or primary caregivers (PCG's) of 21 critically ill children and 17 pediatric intensive care nurses were compared. The purpose of the study was to identify and contrast parental needs of hospitalized critically ill children as identified by the parents and by the nursing staff in an effort to evaluate the accuracy of nursing assessments.

The descriptive comparative study was conducted over a nine month period in the PICU of a 485-bed Midwestern hospital. A non-probability convenience sample of 30 parents of 21 critically ill hospitalized children and 23 PICU nurses were recruited. Data was obtained through interviews from which only the responses of the female family member (n = 21) and the primary nurse (n = 17) were analyzed. Of the female PCGs who participated, 91% were mothers. The remaining women were grandmothers (5%) and aunts (5%). Of the nurses who were reviewed, 94% were female and the average age was 35.8 years, (SD = 7.6).

The group of parents used in the study were PCGs of a critically-ill children aged one hour to 15 years ( $M=4$  years,  $SD=11.0$ ) who had been admitted to the PICU for a period of 36 to 84 hours. All participants were under the age of 18, and were able to speak and understand English. All of the pediatric patients were first time admissions to PICU for an acute onset of an illness or for a surgical procedure which required observation, monitoring, or hemo-dynamic stabilization in the critical care unit.

To control the extraneous variables, parents were not included in the study if their child died during the hospitalization or if the interview was thought to compromise the parent's emotional well being during their stay. The parents of premature infants, PCG's of chronically ill children, or parents suspected of child abuse were also excluded.

The PICU nurses who participated in the study were employed at the same Midwestern hospital. Most of the nurses held an associate degree and had been registered nurses for at least seven years. There were no nurses with advanced practice degrees employed in this PICU.

The same instrument was used to examine both groups in the study. The PCGs and nurses were given the Critical Care Family Needs Inventory (CCFNI) which was modified for pediatrics and included a demographic data form for parents. The CCFNI is a 45 item questionnaire that was designed to quantify the significance of a need. The CCFNI was modified in 1990 by Kirschbaum (1990) to include eight specifically needed statements for the pediatric population. Psychometric evaluation of the CCFNI categorizes perceived needs into five

conceptual categories: support, comfort, information proximity, and assurance. Content validity of the study was established by Kirschbaum (1990). Internal consistency (reliability) of the CCFNI ranged from  $\alpha=.90$  to  $\alpha=.95$ . In this particular study, internal consistency reliability of the modified pediatric version of the CCFNI was found to be  $\alpha=.94$  for the PCG sample and  $\alpha=.93$  for the nurse sample.

In this case, the needs were scored by the family and as perceived by the nurse. The needs statements were rated on a four-point Likert scale ranging from one (not important) to four (very important). The total score is indicative of the relative importance of the need as it was experienced by the subject (Kirschbaum, 1990).

The PICU census was reviewed and the PCGs were contacted by the researcher between 36 and 84 hours after their child's admission to the PICU. The nurses who were chosen were assigned as the primary nurse for the participating family. The consenting nurses were interviewed either immediately before or after the PCG interview.

The order of perceived importance of the 53 needs statements were analyzed using measures of central tendency (M) and dispersion (SD). The PCGs universally identified six specific needs as priorities; the nurses also identified similar needs as being important. These needs included (a) the need to know the expected outcome of the medical treatment; (b) to be given honest answers; (c) to be assured that the best care was being given by caring personnel; (d) to see and visit their child frequently; (e) and to be notified of any

changes in the condition of their child. In addition, the nurses included the subscales of emphasis being placed on child related information and hopefulness as being important.

The relationships of the needs identified by the two groups were analyzed using the Wilcoxon matched-pairs signed-ranks test. There was a significant difference found in the perceived needs of PCG. The parents indicated that they needed to be recognized as important to their child's recovery, to feel that hospital personnel cared about their child, and to talk to the same physician every day. The PCG group also reported that having the waiting room near their child and a close place to sleep were significant priorities. Critical care nurse's ranked situational support, comfort, and self-care needs to be significantly more important needs.

A paired *t*-test was used to compare the PCG need statement with the total score ( $M=181.3$ ,  $SD 19.1$ ) with that of the critical care nurse total score ( $M=85.3$ ,  $SD 18.5$ ), which was computed from the CCFNI. Even though there were differences in the ranking of individual need statements, there were no significant differences between the two groups when identifying for overall perception of family needs ( $t=.77$ ,  $p=.46$ ). Four of the nurses repeated the study twice with different families. Scott felt that this was possibly a needless repetition of the survey.

The conclusion of this study is PCGs and nurses identify similar needs as being important to the care of a critically ill hospitalized child. Both groups revealed that information and proximity needs were more important than support

and comfort needs. Parents valued child-related information and caring personnel. Parents stated that they need to visit their child frequently without time restraints and they need to receive information from the physician at least once daily.

Kirschbaum (1990) conducted a descriptive study to identify the needs of parents of critically ill children before discharge from a PICU and to explore the relative importance of the needs to the parents. The sample included parents from two metropolitan Midwestern hospitals, who had critically ill children (aged one hour to 15 years) who were hospitalized for three or more days in the PICU. The study lasted for a period of ten weeks. Sampling intervals were calculated from estimates based on PICU admission logs. One hospital had fewer eligible participants, so they were all included in the study while every third parent was interviewed at the second hospital.

The sample, Scott believes, may have been limited due to time constraints which involved medical procedures and parent visitation time. Both the mother and father were interviewed for this study in only eight instances; all other surveys were completed by only one parent. In an effort to control extraneous variables, only one response (chosen by coin toss) was included in the study from those parents who were able to visit more frequently. The final sample size was 41 parents ( $N = 41$ ).

In this study, the same exclusion criteria used by Scott (1998), was also used by Kirschbaum. For example, one family was not included based on a suspicion of child abuse. One family was not surveyed because they signed out

against medical advice. The survey of one father was not included because he became upset. These parents were never given a survey because of possible harm or uncooperativeness. Since the sample size of this survey was so small, the author states that there could have been an adverse response to the survey results.

The predetermined parental list of need statements was used to assess the needs of parents. This survey is composed of items that solicit statements of parent need using an attitudinal rating scale. This is the same Critical Care Family Needs Index (CCFNI) that was utilized by Scott (1998) including the eight added needs. The total 53 needs identifiers were randomly ordered. The importance of the needs as perceived by each parent were scored on the same four point scale 1 = "not important" to 4 = "very important." Parents were also given the opportunity to express their perceived needs by completing open ended questions to determine parental likes and dislikes pertaining to patient care.

Upon completing the selection process the PICU nursing staff was asked to estimate the patient's anticipated discharge date. The selected parents were then interviewed one day before transfer when the child was determined to be stable and no more than two days afterward, to aid in recall.

Once informed consent was obtained from participants, the surveyor conducted interviews with one or both parents. The subjects were given item response cards while items were read aloud, which the author feels may have

resulted in coercion bias. Then the relative importance score of each need item was recorded by the interviewer.

When the responses of the 41 parents were analyzed, no statistically significant differences were found between subjects of the two hospitals for parent demographics or child characteristics. The majorities of the subjects (68%) were female, of white ethnicity (63%) and were married (85%). Fifty nine percent ( $N=.59$ ) of the participants lived 26 to 125 miles from the hospital making their travel from home a 31 to 90 minute commute. Seventy one percent ( $N=18$ ) reported a family size greater than four, which implies responsibilities at home other than caring for their ill child.

The eight specific needs were rank-ordered based on median values. Mean ranks calculated for items within categories demonstrated a higher relative ranking for needs relating to perception ( $M=3.75$ ;  $SD=.27$ ), followed by a cluster of relative ranks of categories of needs relating to situational support ( $M=3.09$ ,  $SD=.2$ ), and then coping mechanisms ( $M=3.06$ ,  $SD=.52$ ).

Spearman's rank correlation coefficient was then used to compare the rankings of the needs. These analyses revealed a strong association of ranked needs between planned and unplanned admissions ( $r_s=.84$ ,  $p=.0001$ ) and also between mothers and fathers ( $r_s=.63$ ,  $p=.0002$ ).

Kirschbaum noted that half of the needs requests were for information and this may be related to the child's serious or unstable condition and the advanced technology in the PICU. Therefore, Kirschbaum gleans that interventions directed toward supporting parents' active search for information about the child's

condition should be considered a high priority as parents attempt to diminish their own uncertainty regarding the outcome and the process of care. Also among the important needs ranked in the survey was the need to feel that there was hope (Kirschbaum, 1990).

It was apparent from the study results that parental need for assurance that their child was receiving the best care may reinforce their feeling of hope. The specific item added to the NICU tool, having the parent be recognized as important to the ill child's recovery was ranked highest. Subjects also ranked helping with the patient's physical care as being highly important. Since the average age of the children involved in the study was 14 months it is likely that these parents were accustomed to providing complete physical care and wished to continue to participate at some level despite the technical nature of the environment in the PICU (Kirschbaum, 1990).

The lowest ranking subset of this tool was the parent's perception of needed situational support for themselves. This was consistent with the trend for focusing importance on needs that is directly related to the child's illness. The families (46%) reported that it was "very important" to maintain family togetherness by having the ill child's siblings visit. Eighty percent of the parents indicated that having family or friends nearby for support was also important.

Another descriptive study was conducted by Weech-Melaonado, Morales, Spritzer, Elliott, and Hayes (2001) which asked the following two questions: (1) Do parents' reports and ratings of pediatric care vary by race/ethnicity in

Medicaid managed care? and, (2) Do parents' reports and ratings of pediatric care vary by primary language for Hispanics and Asians?

The data were analyzed using the National Consumer Assessment of Health Plans (CAHPS) Benchmarking Database 1.0 and involved 9,540 children enrolled in Medicaid managed care plans from 1997 to 1998 in the states of Arkansas, Kansas, Minnesota, Oklahoma, Vermont, and Washington. The data was collected by telephone and mail surveys, and the surveys were administered in both English and Spanish. The rate of response for both versions was 42%. The data was analyzed using multiple regression models.

The dependent variables in this study were CAHPS 1.0 ratings including personal doctor, specialist, health care, health plan, and reports of care (getting needed care, timeliness of care, provider communication, staff helpfulness, and plan service). The independent variables were race/ethnicity (African American, American Indian, Asian, Hispanic and white), Hispanic language (English or Spanish), and Asian language (English or other), controlling for gender, age, education, and health status.

Whites reported receiving better care than did racial/ethnic minorities. Race/ethnicity was not found to be a stronger influence than language in perception of care received. This study concluded that language barriers were largely responsible for racial/ethnic disparities in care. Weech-Melaondaro, et al., suggests that a linguistically appropriate approach to services would address the gaps in perception of care received.

The goal of the descriptive study by Pitman, Marino and Marino (2000), was to determine which nursing care practices were predictive of parental satisfaction during the hospitalization of an ill child. The study was conducted in a tertiary pediatric teaching hospital between 1995 and 1998 and included 3,299 families of hospitalized children. The survey targeted their experiences during their stay in the hospital and their overall satisfaction with care. The survey was conducted six times over the course of three years.

The survey included parents of children aged 17 or younger, who were contacted via letter from the hospital president prior to being contacted by a professional telephone polling company. The response rate for this survey was 77%. Three hundred seventy seven families were excluded because their child was discharged home directly from the ICU, was an observation patient, or was a patient on an overflow unit. The parents were asked fifteen questions related to satisfaction with patient care. Sixty percent (N=42.1) related their care as being excellent overall. In individual nursing units the range of excellent ratings was from 40 to 79%.

The strongest needs were identified parents as follows: information sharing, warm and caring interaction with the parents, respectful, age appropriate interaction with the child, and acknowledgment and development of competencies in caring for their ill child. Satisfied parents reflected that the nursing care had been tailored to their specific needs and preferences. The survey questions, which were most strongly correlated with parental satisfaction, dealt with collaboration between nursing staff and parents.

The limitations of the study include that it was conducted over the course of three years during which time the hospital was undergoing a restructuring. Also the data was collected 23 weeks after discharge when the memory of the critical experience may have been muted.

Azoulay, Pochard, Chevret, LeMaire, Mokhtari, LeGall, Dhainaut, and Schlemmer, (2001) examines a prospective multi-center study with a dual goal to measure the ability of the ICU staff to meet family needs and to identify parameters that could be improved for family satisfaction. The descriptive study was based on the Critical Care Family Needs Inventory (CCFNI). Forty three of the 72 French ICUs were selected by a randomized procedure, and were then invited to participate in this study. The data on ICU characteristics, patient and family member demographics on satisfaction were collected.

Factors associated with satisfaction were identified using a Poisson regression model, the logarithm of the satisfaction score was modeled as a linear function of the parameter representing each variable, in both invariable and multivariable analyses. Both standard errors and chi-squares were corrected to account for potential over dispersion and extraneous variables. All statistical analyses were conducted using the SAS 6.12 package (SAS Inc., Cary, NC).

Six hundred thirty seven patients were included in the study, and 920 family members completed the questionnaire. Seven predictors of family satisfaction were found. Six caregiver-related factors, specifically, (a) having no perceived contradictions in information given by caregivers, (b) information provided by a junior physician, (c) patient ratio of #3, (d) knowledge of the

specific role of each caregiver, (e) help from the family's own doctor, and (f) sufficient time spent giving information. One potential limitation of the study was that it was not conducted in the United States. This may limit the application to nursing practice in this culture because the value systems are subtly different.

Mc Pherson, M. L., Sachdeva, R.C., Jefferson, L. S., (2000) conducted a non-experimental study to develop a survey which would measure parent satisfaction with medical care administered in the PICU. The instrument could be administered before transfer from the PICU to the pediatric unit or discharge to home. The survey was developed to be easily understood by the parents, and could be assessed for reliability and validity by statistical analysis. The setting was conducted in the PICU of Texas Children's Hospital. All parents of all patient diagnostic categories were eligible, during January and February of 1997. Sixty-six parents voluntarily participated in this survey with special attempts made to include parents identified by nursing as "difficult" and "cooperative."

A four stage process of item selection, item reduction, pre-testing, and test analysis was used to create a 24-item parent satisfaction survey that was statistically analyzed and developed for parents of children in the PICU. The survey tool was developed with the input of parents and children admitted to a PICU, and administered to families in the PICU. The final survey was analyzed for validity and reliability, with an acceptable reliability coefficient  $\alpha=.83$ . Validity was partially established by including parents in the identification of survey topics. Criterion validity was not performed because of the lack of existing validated surveys available for comparison. All survey statements were

categorized into one of three subscales: hospital environment, patient care, and communication. No values of results were given.

Limitations of this study include the restricted number of items in the final survey. Another limitation was the inability to assess the opinion of the parents from other language backgrounds. Twenty-two percent of the survey results were Hispanic or Asian. There was also selection bias in the attempt to include the parents labeled as “difficult.” The fact that they were labeled is significant, considering the small sample size as well as the inability to fully assess the validity of the tool. This could have been improved by including more parents. Further studies are needed to determine test retest reliability.

In conclusion, this study was a classic survey design that was developed specifically for use in the PICU setting. The tool’s reliability measured levels of parent satisfaction with medical care, and demonstrated the feasibility of applying classic methodology to develop a statistically analyzed parent satisfaction survey for an inpatient setting.

### *Theoretical Framework*

Watson’s theoretical framework was incorporated into this study. Watson’s model of caring states the goal of nursing is “to facilitate the individual’s gaining of a higher degree of harmony within the mind, body, and soul (Watson, 1999).” As a result Watson’s goal generated self knowledge, self reverence, self healing and the self care process while increasing diversity within caregivers (Watson, 1999). In completing Watson’s goals, complete patient care satisfaction was attained (Watson, 1985). The ideal of caring is one of the oldest forms of human

expression (Watson, 1985). Watson views caring as the central component of nursing and identifies caring as being attained through the human-to-human caring process and caring transactions. Holistic care is accomplished by incorporating Watson's ten carative factors resulting in a Transpersonal Human Caring System (Watson, 1999).

Watson referred to nursing as both scientific and artistic, and felt that nurses should be required to have a strong Liberal Arts background to "relate" to their patient and give complete care in a holistic environment (Watson, 1999). Watson believed that symbolic relationships are created between the care giver and the care recipient as the caring environment offers development for potential while allowing the patient to choose the best action for her/him at a given time. Watson interprets caring as the moral ideal of nursing whereby the end product is protection, enhancement, and preservation of human dignity for the patient (Watson, 1999).

In attempting to attain Watson's Human Caring Theory and incorporate her Carative Factors into everyday nursing practices, Watson admits that the fulfillment of Maslow's Hierarchy of Human Needs must first be met. Watson believes that the nurse who practices this science of caring transcends the limitations and restrictions of a scientific approach because of the care giver's respect, knowledge, and understanding of the whole person (patient) (Watson, 1985).

Of Watson's ten carative factors this paper will discuss the four which are essential to this research. First, the development of a helping-trust relationship

between the care giver and the care recipient will be explored. According to Watson, the development of the nurse's relationship with the patient is the most significant element in determining helping effectiveness (Watson, 1985). The nurse must first get to know the patient, including the patient's self, life space, and phenomenological view of his or her world before she/he may develop an effective relationship (Watson, 1999). This concept was identified and measured by the researcher as trust or demonstrating a caring or attentive attitude (Scott, 1998). This subset was labeled as patient care.

Second, Watson identifies the provision for supportive, protective, and (or) corrective mental, physical, sociocultural, and spiritual environment (Watson, 1999). This aspect was identified and measured as the external environment including such factors as stress-change, comfort, privacy, safety, and clean-esthetic surroundings (Watson, 1999). This subscale was labeled hospital environment.

Next, the curative factor of instillation of faith and hope will be explored in this study. Faith and hope are extremely important factors in the curative as well as the curative process, and have been documented throughout history as such (Watson, 1999). Regardless of the expected outlook of a treatment, hope and faith can provide a positive outcome of communication.

Lastly, Watson identifies the promotion of interpersonal teaching-learning as a process engaged by both the nurse and the patient (Watson, 1999). Nursing has always maintained health teaching as one of its main functions. Informed consent allows parents to be knowledgeable and make solid decisions which

affect the outcomes of their children (Watson, 1999). The art of nursing education is determining creative and effective methods of education. Imparting of information is an explicit way to reduce fear and anxiety when it is related to uncertainty (Watson, 1999). Watson believes that a treatment plan must be specifically tailored for each patient. For the purpose of this study, these two concepts were grouped together as the subset of communication.

### *Summary*

In summary of the literature review specific aspects of health care were found as necessary to provide parental satisfaction in the care of critically ill children admitted to the PICU. Scott (1998) indicated that patient care givers and nurses identify similar needs as being important to the care of a critically ill child in the PICU. Frequent visitation of family and child-related information exchanged were identified as the most important elements of patient care (Scott, 1998). The literature again indicated that parent's value receiving information of the child's condition and treatment plan along with having the parent recognized as an important role in the recovery of the child (Kirschbaum, 1999).

Weeche-Melaondao (2001) discovered that white English speaking parents reported better care than African-Americans, Hispanics or non-English speaking parents. Pitman, Marino & Marino (2000), reported that parents are happiest with care tailored specifically to the needs of their child. Stating that with caring interactions, respect, and age appropriate communication, accomplishment of parental expectations can be met (Pittman, 2000).

Azoulay, et al., (2001) notes that there are seven predictors of family satisfaction, issues with information, knowledge, caring actions of caregivers, and amount of time spent giving/receiving information about the child. McPherson identified a need for a tool to specifically measure PICU parental satisfaction and revised a pre-existing Neonatal Intensive Care Unit Parental Satisfaction Survey to measure the pediatric parent's specific needs. One item McPherson added was to define the need of the parent to continue to be a care provider during the illness.

Watson's carative factors also support that the caring environment played a vital role in parent satisfaction and further supported the speculation that if these major carative factors are not met, then patient satisfaction can not be achieved. The first Watson concept that will be touched upon in this study is the development of a helping-trust relationship, which will be tested by the patient care subset of this tool.

Secondly, hospital environment which includes the provision of a supportive, protective, and spiritual environment that includes aesthetically pleasing characteristics such as comfort, safety and privacy. Watson also believes holistic care can not be attained without adequate instillation of hope and faith that the outcome of their child will be realistic. The promotion of interpersonal teaching and learning of the altered child is a bonding experience for the nurse and parent. Watson believes that through this communication, the nurse can become a part of the experience and holistic care is achieved.

Watson's transpersonal caring approach is holistic and provides the supportive care necessary in the PICU setting.

### *Chapter Three*

Chapter three will describe the research design, identify the sampling, setting, procedures, limitations, and outline a time line for the study.

#### *Methodology*

A non-experimental research design was used to measure parental satisfaction of care in the PICU. Data were collected through the use of two questionnaires: (a) the PSS: a twenty-four question survey measured on a Likert scale ranging from one to five to identify if satisfaction needs were met, (Appendix A), and (b) a seven-item Demographic Questionnaire (Appendix B).

#### *Design*

Data were collected from parents whose child had been a patient in the PICU for longer than twenty-four hours although no more than fourteen days. The PICU was located within a regional referral center. The medical facility provided care for a tri-state area. The selected facility is a not-for-profit, academic tertiary care hospital. The facility is a teaching institution and is affiliated with a School of Medicine, five Nursing programs, two respiratory therapy programs and a Radiology school located in the tri-state area. In addition to the PICU, the facility provides specialized care for Cardiac, Adult, Burn, and Neonatal Intensive Cares, and is a certified level II trauma center. The facility also provides specialized rotary wing, fixed air, and ground transport services.

#### *Setting*

The PICU is a ten bed unit located on the fifth floor in a 480 bed Appalachian hospital. The PICU is a locked unit and parents must utilize the

phone/video monitor security system for entrance into the locked unit. Each room is private and isolated. Nine of the ten rooms have negative air flow to reduce air borne-infections and one positive air flow room for acute immuno-suppressed patients. Each room is also equipped with individual cardiac and respiratory monitors with a central monitor at each of the two nurse's station. Seven of the ten rooms include private bathrooms, three have none, and in this case, the family must go to the lobby to use the public restrooms. Showers are provided by the facility along with towels and hygiene products as a courtesy for the family when needed.

The PICU has open visitation for the patient's family with a two person limit per patient due to room size and noise levels. No one under the age of fourteen or adults who have experienced a recent contagious illness are admitted into the unit for visitation. One parent may sleep in the room during the night in fold out beds with linens provided by the hospital. There are no phones in the room, although phones are located in the visitor's lobby for family and public use. The facility is associated with the Ronald McDonald House Association and can house up to ten patient families at one time, free of charge for families living outside of the facility's 50 mile radius. The Ronald McDonald House is currently remodeling to accommodate twenty families and is expected to be completed in December of 2003.

The unit supports a specialized pediatric transport team and transports children from a one-hundred plus mile multi-state area. Patients admitted to the PICU have a varied of diagnosis including respiratory failure, cardiac

abnormalities, pre and post surgical candidates, congenital abnormalities, immuno-compromised, trauma, oncology, along with other critically ill children ranging in age from a few hours to eighteen years.

The PICU is composed of Registered Nurses providing complete nursing care, Medical Residents, Respiratory therapists, phlebotomists, and two Pediatric Intensivists. The unit also has two full-time unit secretaries and three part-time who fulfill clerical duties only. This setting was chosen because of the convenience of location and the researcher's accessibility to the information required for this study.

### *Sample*

The sample consisted of one hundred and one anonymous surveys completed by a convenience sample collected over a two month period. The parents who participated included: (a) parents of children who were admitted for at least 24 hours but no longer than two weeks, (b) parents who completed and returned the survey within 48 hours after PICU discharge, (c) parents who were able to read and speak English and/or Sign Language or Spanish fluently. The survey was provided in English and the hospital had a Spanish and Sign Language interpreter on call for assistance as needed.

Exclusion criteria consisted of: (a) parents who refused to complete the survey, (b) situations which may have caused harm or added stress to a parent or child, such as time or positive attention taken away from child, (c) parent whose child was admitted to the PICU less than 24 hours or greater than two

weeks, (d) parents who's child had died (e) parents who communicated in ways other than English, Sign Language, or Spanish.

### *Instrument*

The Parent Satisfaction Survey (PSS) was developed in 1999 by Dr Mona McPherson of Baylor University in Houston, TX. The PSS was specifically designed for the PICU setting to measure parental satisfaction with care in a pediatric intensive care setting. The scale was developed after a literary search for an appropriate tool to measure PICU Parent Satisfaction could not be located. McPherson modified a Neonatal Intensive Care (NICU) survey and used the NICU Parent Satisfaction Survey (NPSS) as a guide to develop the PSS. This PSS has been used only once at Baylor College in Texas, no further research has been found pertaining to this tool. Requests to use this tool have come from Winnipeg, Dallas, Germany, West Virginia, and France, however there has been no further information published on this survey (McPherson, electronic communication, April 4, 2003).

The PSS measures three domains of care: (a) hospital environment, (b) patient care, and (c) communication. This initial survey was designed to simply and accurately measure parent's satisfaction of PICU nursing care upon discharge of the patient.

The PSS includes twenty-four statements which were scaled on a five point Likert scale with one equaling strongly disagree and five representing

strongly agree (Appendix A). The PSS has a Cronbach's coefficient alpha  $\alpha=.83$  which is above the generally accepted  $\alpha=.70$ .

Demographic Data (Appendix B) included information regarding parent's gender, parent's age, ethnicity, child's length of stay in the unit, number of hospitalizations, education and income levels. In addition to the survey there were three open ended qualitative questions to complete the survey that determined the best and worst qualities of the PICU stay, along with a suggestion request for any needed changes perceived by the parents.

### *Procedures*

Electronic permission from Dr. M. McPherson, the author of PSS, was obtained prior to any contact with the PICU parents or Institutional Review Board (IRB). After obtaining Dr. McPherson's permission to use her tool, an application for expedited review was sent to the IRB (Appendix C). Approval from Marshall University's IRB (Appendix D) was obtained prior to any patient/parent contact in regard to the PSS. Permission from the PICU Nurse Manager to conduct the survey in the PICU (Appendix E) was obtained. Upon receipt of acceptance from all of the above, the author initiated the survey procedure.

Implementation of the PSS and demographic survey began; an in-service was given to each of the staff members to assist in collection of data, the procedure was reviewed. One PSS was given to each of the parents after discharge from the PICU. Implied consent was obtained with survey participation and completion. A forty-eight hour completion window was given to the parents; this time allowed for re-orientation to the environment and self-reflection of the

PICU patient care that was received. The parents placed the completed PSS in an clearly identified locked box at the main nurse's station to ensure confidentiality.

#### *Time Line*

A timeline for completion of the study was developed and is displayed in the Gantt chart in the appendix (Table 1).

#### *Analysis of Data*

The returned questionnaires were scored and analyzed by the researcher. Descriptive statistics including mean and standard deviation for the study sample were calculated. Pearson's  $r$  Correlation Co-efficient was used to examine the PSS scores for correlations among the demographics and subscales. Cronbach's Coefficient Alpha was used to determine the internal reliability consistency of the PSS for this sample. The three open ended questions were analyzed and categorized for common themes.

#### *Limitations*

An expected limitation for this study was the use of convenience sampling during a seasonal period. An increase in the number of patients and additional increase in the employee stress levels could have been another limitation. Another anticipated limitation was coercion or acquiescence bias due to parental fear of retaliation for negative and non-favorable reports of received care. Due to the patient remaining under the care of a physician on the pediatric floor in the same facility, there may have been hesitation to give an honest recall of care provided in anticipation of further lack of satisfactory nursing care.

Convenience bias of the study may have been present due to the small proximity of the pediatric units and the parental use of the Ronald McDonald House. Historical data has shown that parents in similar situations tend to share related information and form personal bonds with the other parents and often skew judgment of care. Noise and interruption along with the response burden may also limit the outcome of the study.

It may have also been difficult for the parent to measure the care their child received if no prior hospitalization experience had occurred before the time of admission. Furthermore, the education level of the parent may have played a significant role in the measurement of the care their child received. Studies have proven that with more education parents become more critical of medical care received (Patrick, Ferris, Marino, Homer, Perrin, 2003).

### *Summary*

The 189 questionnaires were given to the children's parents prior to the transfer to the pediatric floor or discharge home. The 101 completed questionnaires were returned by the parents to the locked box concealed at the nurses' station on the pediatric floor within 48 hours of transfer or discharge.

### *Chapter Four*

The purpose of this chapter is to present the findings, limitations, discussions, recommendations, and conclusions of the study. This study evaluated if hospital environment, patient care, and communication effected parent satisfaction of patient care in the PICU. The specific research questions for this study were:

1. Was there a relationship between the hospital environment and parental satisfaction?
2. Was there a relationship between patient/parent care and parental satisfaction?
3. Was there a relationship between communication and parental satisfaction?

### *Data Analysis*

Data was collected through the use of a 24-item socio-demographic questionnaire, and three open-ended questions to examine parent likes and dislikes and to identify areas for change in the PICU. Responses to the questionnaires were analyzed by the SPSS, a statistical computer program. Data was analyzed using descriptive and inferential statistics.

### *Reliability Assessment*

The Cronbach's Coefficient Alpha for the total sample was  $\alpha=.89$ . Internal consistency reliability of the scales using Pearson correlation coefficients was assessed and is reported in Table 3. Cronbach's coefficient alpha reliability

estimates for each subscale: hospital environment, patient care, and communication, are also reported in Table 4.

### *Results*

The sample ( $N=101$ ) consisted of parents of children who were admitted in the PICU between the months of March and May of 2003. Of this sample, eighty-four percent ( $n=85$ ) were female and sixteen percent were male ( $n=16$ ). Eighty percent of the sample ( $n=81$ ) were Caucasians, six percent were African American ( $n=6$ ), three percent were American Indians ( $n=3$ ) and two percent were Pacific Islanders ( $n=2$ ). Fifty one percent of the respondents were 20 to 30 years of age ( $n=51$ ), twenty eight percent of the parents were 31 to 40 years of age, and twenty percent of the sample was less than 20 years of age ( $n=20$ ). Only two percent of the sample reported being over the age of forty ( $n=2$ ).

Number of times the child had been admitted to the PICU ranged from one to three within the child's life time. Seventy six percent of the sample were admitted for the first time ( $n=76$ ) with nineteen percent of the sample having been admitted for the second time ( $n=19$ ), and the third admission only six percent of the children ( $n=6$ ).

The length of stay (LOS) of the subjects ranged from two to fourteen days. Forty-seven percent of patients ( $n=47$ ) were admitted for less than two days while fifteen percent ( $n=15$ ) of the patients were admitted for eight to fourteen days.

The majority of the sample had a household income level less than \$20,000 ( $n=41$ ), 41%. Sixteen percent of the sample reported income levels

between \$40,000 and \$80,000 ( $n=18$ ) and three percent reported more than \$80,000 household income levels ( $n=3$ ). The majority of the sample had an high school education ( $n=55$ ). Twenty-two percent ( $n= 22$ ) reported a college or higher educational level. Socio-demographic characteristics are displayed in Table 2.

A strong correlation was found ( $r=.75$ ,  $p<.01$ ) between hospital environment and parent satisfaction, indicating that the environment was important to parent satisfaction. In addition, a more significant relationship ( $r=.86$ ,  $p<.01$ ) between patient care and parent satisfaction was identified, indicating that good patient care is necessary for parental satisfaction. Lastly the strongest relationship of all was found to be between communication and parental satisfaction ( $r=.92$ ,  $p<.01$ ) indicating that communication is the most important aspect of parent satisfaction.

Individual Pearson's Correlation Coefficient was examined for each question on the survey. The results the survey found that parents rated the overall care their child received as satisfied to very satisfied as evidenced by the question "I am very satisfied with the care my child has received in the ICU" ( $M=4.5$ ,  $SD 1.1$ ) and the question "I would recommend this ICU to a friend or a family member who needed to be hospitalized" ( $M=4.7$ ,  $SD .6$ ).

However, there were some significant problems with subscale categories. Hospital environment responses indicated that although the aesthetic value of the unit was adequate, the noise level was too high for patients and family members to relax; as indicated by the response to the question "My child's room is too loud for him/her to rest" ( $r=.27$ ,  $p<.05$ ). The subscale of patient care

indicated that the nurses did not respond to child's needs promptly received very low agreement ratings ( $r=.60$ ,  $p<.01$ ), indicating that nurses were somewhat delayed in obtaining specific needs identified by parents such as diaper and linen fetching. In communication, "caregivers did a good job in preparing me for my child's stay in the ICU" ( $r=.22$ ,  $p<.05$ ) was the lowest ranked question of the entire survey. This response may have indicated that parents may not have been fully oriented to the PICU appropriately or that the parent's level of stress was so intense that full comprehension of the moment may have not been obtained. There was no parental explanation obtained for this question.

The quantitative portion of the survey revealed parents preferred open visitation, personal relationships with the staff, open communication and thorough discussion of the treatment plan and expected outcomes for their child. Dislikes of the parents' included: having to leave the unit for patient reports at the beginning of each shift, and having no telephones in the patient rooms.

Parental suggestion for improvements included changes in the hospital environment such as making the rooms larger, eliminating the spectra link cordless phones for employees' personal use, reducing the noise level, and adding restrooms to the three patient rooms that do not have restrooms. Additional suggestions included placing mirrors in the bathrooms and allowing children under the age of fourteen to visit when the patient is stable.

Patient care improvement areas included visitors and staff to wash hands prior to and after touching the patient and to increase parent education of the child's disease process as well as long term care goals. More frequent contact

with physicians was the most reported suggestion for improvement in communication. In addition, complaints about physician personality conflicts and the amount of time the physician spent with the patient and family on a daily basis were also parental issues. Parents had some personal conflict with individual nurses but the overall impression of the nursing staff was positive.

### *Limitations*

Several limitations to this study have been taken into account. Emotional attachments and staff bias may have skewed some of the communication and patient care responses. A recent study identified that teaching facilities may result in a higher degree of dissatisfaction with care (Patrick, 2003), indicating that teaching facilities, such as this hospital environment, may have more complex problems and thus require more advanced care than non-teaching hospitals.

Instead of being mailed to the parent's home, this survey was completed by parents at the time of care; therefore upon discharge of the patient to the pediatric unit, some bias may have occurred based on fear of retaliation from the medical and nursing staff for negative or non-favorable reports of prior care. The amount of noise and the many distractions in the pediatric unit may also have been an environmental bias, thus not allowing the parent to fully concentrate on the questions of the survey.

The survey including the socio-demographic portion was very lengthy; this also may have resulted in response burden. Prior admissions to the PICU may have also fostered recall bias of the parents comparing this admission to the

more positive or negative experience of previous admissions. Due to this facility serving rural a Tri-State area, the modern and up-to-date amenities such as air-conditioning and running water may have created an acquiesce response bias in that the accommodations provided for the family were more comfortable than what the parents were accustomed to at home. Lastly, some researcher bias may have occurred because the researcher of this study presented the surveys to the parents and gave verbal instructions on how to fill out the surveys as well as provided direct care to some of the children in the PICU.

### *Discussion*

*Nursing Implications:* Watson believes “the nurse is viewed as a co-participant in the human care process (Watson, 1999).” In this theory, the nurse’s role is that of an expeditor in which incorporates the underlying value system of the parent and creates sensitivity to oneself and others. In the pediatric population, all of Watson’s ten carative factors can easily be incorporated in the day-to-day care provided to the child and their parents. However, this study chose to focus only on the four which closely related to the subsets of the tool.

The hospital environment must place emphasis on the supportive, protective, physical and spiritual needs of the patient (Watson, 1999); in doing so, more personalized care is rendered. Some of the specific actions the nurse should encourage include allowing parents to stay at the child’s bed side or to sleep in the child’s bed when warranted. By allowing the parent closer contact with the child, the child feels more secure in the unfamiliar environment. Another comfort measure the nurse could incorporate is to encourage the family to bring

in the child's favorite stuffed animal or security blanket to further reduce the stress and anxiety of the child. Adequate instillation of hope and faith is another carative factor of Watson's. Simple nursing gestures such as accommodating for the family's spiritual representative to visit or allowing a prayer cloth to be in the child's bed provide great comfort to parents.

In delivering patient care to children, Watson recognizes that it must be completed in a creative-problem solving caring manner (Watson, 1999). Infants are typically easy to manage although toddlers, preschoolers and adolescents pose a much greater challenge to nurses. In rendering patient care it may be necessary for the nurses to take extra time for role play, and give very explicit step by step commentary for procedures which may occur. Traditional nursing care may fall to the way side in caring for children, in that listening for breath sounds may give heed to listening for "Barney" instead. Most school aged children and adolescents are very independent. Nurses are routinely teaching the children how to flush an intravenous line with normal saline or to change dressings (on themselves). By incorporating the child into his/her own plan of care, the child is more comfortable in the environment and patient care is improved.

Communication has many facets, although for the purposes of this study, Watson focuses on the promotion of interpersonal teaching and learning. Questions on PSS such as "The health care providers in the PICU keep me well informed about my child's condition" received scores of 4.5 to 5 indicating that

knowledge about the child's condition were imperative to the parental satisfaction of child care.

Nurses must not only educate patients to disease processes, treatments, and possible patient outcomes; parents, grandparent, siblings, and all other family and support members also request to be educated. With attainment of parental permission, nurses must take the time to explain all of this to families. In reviewing the educational portion of the socio-demographic section of the survey, indicated that 79% of the respondents in this sample were of high school or less education level; this can often pose learning obstacles that nurses must overcome.

In using Watson's carative factors as a guideline for nursing care, holistic care is incorporated in to every day nursing practice. Studies have proven that with holistic care, parental approval of care increases (Kirschbaun, 1990, Scott, 1998). Therefore, with increased parental approval, it is more likely that parents will continue to bring their children to this facility for PICU care. In every setting, nurses must be aware of the care they provide in order to incorporate parental gradification components into their daily practice (McPherson, 2000). While being attuned to parental needs, nurses can continually assess and make appropriate alterations in the method of care delivery when needed, to better address parental satisfaction (McPherson, 2000).

*Nurse educators* must be aware of parental needs to educate students and nurses on the latest trends and skills directly related to parent satisfaction. By using Watson's carative factors as a guide, all three subsets measured by the

PSS were incorporated and found to provide an increase in the continuity of care. Nurses must also be educated on aspects of nursing; parents accept as the basic standard of care and are satisfied with. Educators must continually evaluate new methods of nursing care and incorporate them into the nurse's everyday practice.

*Nursing administrators* realize that in the current market, health care must be delivered in a productive, cost effective manner in order to have health care resources in the future (Patrick, 2003). Knowing this makes it imperative for Nursing Administrators to understand how patients perceive and determine satisfaction. Administrators must develop policies that incorporate delivery of nursing care to include parent satisfaction awareness. Watson's transpersonal human caring theory fills this void. Health care team members need to be aware of the increasing importance to identify parental expectations and understand its significance. Without parents, there will be no children to care for.

### *Recommendations*

Parental satisfaction has never before been measured in this Appalachian PICU setting. The results of this study were used to improve today's patient care and nursing practices by identifying deficits in parental contentment in hospital environment, patient care, and communication. Parental satisfaction was also enhanced by determining specific factors of parent disapproval such as lack of physician interaction and limited visitation hours. However future studies must be more specific to identify the needed areas of improvement such as the need for more parent education in order to better assess parental needs.

Hospital environment complaints included too much noise and the need for comfort measures such as mirrors in the bathrooms, telephones, better regulation of room temperatures, and restrooms. Measures such as replacing metal trash cans with plastic cans and padding the bottoms, shutting the doors to the patient's room, and turning down alarm volumes would alleviate some of the noise. Mirrors placed in the patient restrooms and telephones in the rooms that only call out are other small gestures that may improve parent satisfaction. Due to the frustration the parents stated they experienced, the staff should limit personal conversations on the Spectra Link cordless phones to more appropriate times when the staff is not performing direct patient care. Child safe fans had already been placed in each room to better adjust room temperatures; whereas installing restrooms in the three patient rooms that are without would be of great expense and not likely economical or architecturally feasible.

Better hand washing of both visitors and staff were also areas of concern for parents. Some parents specifically stated that they did not find the use of the antibacterial alcohol hand mousse reliable. In the future, the researcher recommends that the mousse is continued to be available on the PICU, and that the employees educate the parents of its effectiveness.

The most reported suggestion for communication improvement was more attending physician-parent contact to provide up-to-date information on the condition of their child. In this facility, the Attending makes daily patient rounds and are on twenty-four hour call; whereas the Residents are in-house and rounding more often while continuing to be in constant contact with the Attending.

Parents indicated that they prefer to speak with the Attending rather than a Resident to address issues and concerns. Therefore, the researcher suggests that the Attending should schedule a designated time each day for patient rounds, where parental concerns can be included and discussed.

Another suggestion to improve communication is to replace the corkboard communications boards with dry erase boards and require that the name of the nurse, respiratory therapist, physician and resident be written on and change with each shift accordingly. This will better inform the patient as to who is taking care of him/her and result in more accountability and personal interaction with the nurse and other caregivers. Health care providers must also remember to keep parents updated on labs, X-rays, and procedure results, as the parents have indicated that there is a lack of timely communication.

### *Conclusion*

Parental satisfaction with the care of their critically ill children in this Appalachian hospital was measured using McPherson's Parent Satisfaction Survey. The PSS was found to be reliable with this sample. Total parental satisfaction was high with the three subscales within the PSS: Hospital environment ( $M=4.6$ ,  $SD=.46$ ). Patient care was also above average ( $M=4.7$ ,  $SD=.37$ ), with the most satisfaction implied with communication ( $M=4.7$ ,  $SD=.47$ ).

In evaluating the results of this survey, there was no relationship found between increased parent satisfaction and parent's age, race, number of admissions to the PICU, patient's length of stay or household income, however there was a weak correlation between the level of education the parent had and

the level of satisfaction ( $r=-.22$ ,  $p<.05$ ). This survey indicated a finding that with parents having a high level of education, college or above typically resulted in less parental satisfaction of care.

Parents identified needs including, more time with the physician, mirrors in the rest rooms, telephones and rest rooms in each of the patients rooms. Open visitation with more than two visitors and allowing both parents to sleep in the patient's room at night were frequent suggestions. Discontinuing the employee use of Spectra Link cordless phones or limiting the use only to hospital business was also a frequent suggestion for patient care improvement by the parents.

There is a growing interest in positive parental satisfaction as an outcome of care and as an indicator of the quality of medical care. In using this PSS the results have indicated a high level of fulfillment of parental needs in this sample. Ongoing research needs to be continued to constantly evaluate the parental desires and satisfaction level in this environment to improve and continue providing excellent patient care to critically ill children and their families.

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Table 2

Sociodemographic Characteristics for Sample Participants (N=101).

<b>Characteristics</b>	<b>n</b>	<b>%</b>
<b>Respondent's Gender</b>		
Male	85	84.2
Female	16	15.8
<b>Race</b>		
Caucasian American	81	80.2
Black American	6	5.9
American Indian	3	3.0
Asian American	2	2.0
<b>Parent's Age</b>		
20 – 30 years	51	50.1
30 – 40 years	28	27.7
Younger than 20 years	20	19.8
Older than 40 years	2	2.0
<b>PICU Admissions</b>		
One	76	75.2
Two	19	18.8
Three	6	5.9
<b>Child's Length of Stay</b>		
24-48 hours	47	46.5
3 – 7 days	39	38.6
8-14 days	15	14.9
<b>Household Income</b>		
Less than \$20,000	41	40.6
\$20,000 - \$39,999	37	36.6
\$40,000 - \$79,999	3	3.0
More than \$80,000	2	2.0
<b>Parent Education Level</b>		
High School Diploma	55	54.5
College	15	14.9
Less than High School	13	12.9
GRE	11	10.9
Graduate School	7	6.9

Table 3

Internal Consistency Reliability using Pearson Correlations and Cronbach's Coefficient Alpha for the Study Scale (N=101).

**Subscale: Hospital Env. - Patient Care – Communication - Subscale Alpha.**

Hospital Environment	1.00			.57
Patient Care	.86*	1.00		.78
Communication	.92*	.75*	1.00	.86

\*p<.01

Table 4

Descriptive Statistics for Total and Subscale Scores ( $N=101$ ).

<b>Subscales</b>	<b>Minimum Scores</b>	<b>Maximum Score</b>	<b>M</b>	<b>SD</b>
Hospital Environment	3.2	5	4.60	.46
Patient Care	3.5	5	4.72	.37
Communication	3.2	5	4.66	.47

Appendix A

# *PICU*

## Parent

## Satisfaction

## Survey

This survey is an attempt to assure Pediatric Intensive Care admission satisfaction. By filling out the anonymous questionnaire, you are consenting to participate in this survey. The answers obtained will be kept confidential. Please do not identify yourself on the survey.

Your participation in the survey is strictly voluntary, and your decision to complete the survey will not affect the care and/or treatment of your child. You will not be paid for your willingness to complete the survey.

Please put *completed surveys* in the locked drop box at the nurses' station or give to your nurse.

Thank you for taking time to participate in this survey.

If you have any questions in regards to this survey, please contact Vicki Koontz, RN, BSN at ext. 2399 or (304) 697-7185. Vicki is conducting this survey as part of her thesis requirements to obtain Masters of Science in Nursing at Marshall University. The results of this survey will also be given to Cabell Huntington Hospital to provide better patient service in the future.

Thank you again for your cooperation.

Instructions: Please circle the number that most accurately reflects your view on each statement.

**1. = Strongly disagree**

**2. = Disagree**

**3. = Neutral**

**4. = Agree**

**5. = Strongly agree**

---

1. My child's room is clean and comfortable.

Strongly disagree 1 2 3 4 5 strongly agree

2. The PICU nurses are caring and compassionate.

Strongly disagree 1 2 3 4 5 strongly agree

3. It is very important for caregivers to keep my child's bed neat and clean.

Strongly disagree 1 2 3 4 5 strongly agree

4. Nurses respond to my child's needs promptly.

Strongly disagree 1 2 3 4 5 strongly agree

5. My child's room is too loud for him/her to rest.

Strongly disagree 1 2 3 4 5 strongly agree

6. The doctors in the PICU are caring and friendly.

Strongly disagree 1 2 3 4 5 strongly agree

7. The doctors and nurses work together as a team in the PICU.

Strongly disagree 1 2 3 4 5 strongly agree

8. My child has received excellent nursing care in the PICU.

Strongly disagree 1 2 3 4 5 strongly agree

9. Healthcare providers did a poor job preparing me for my child's PICU stay.

Strongly disagree 1 2 3 4 5 strongly agree

10. The doctors in the PICU answer my questions thoroughly.

Strongly disagree 1 2 3 4 5 strongly agree

11. Nurses' respond slowly to my child's needs.

Strongly disagree 1 2 3 4 5 strongly agree

12. Caregivers do not do a good job of informing me who will fill in while they are off duty.

Strongly disagree 1 2 3 4 5 strongly agree

13. My child's privacy and confidentiality were respected during his/her PICU stay.

Strongly disagree 1 2 3 4 5 strongly agree

14. Caregivers did a good job preparing me for my child's PICU stay.

Strongly disagree 1 2 3 4 5 strongly agree

15. I am very satisfied with the care my child has received in the PICU.

Strongly disagree 1 2 3 4 5 strongly agree

16. I would recommend this PICU to a friend or family member who needed to be hospitalized.

Strongly disagree 1 2 3 4 5 strongly agree

17. I do not feel healthcare providers spend enough time at my child's bedside.

Strongly disagree 1 2 3 4 5 strongly agree

18. I appreciate healthcare providers who speak to my child even though he/she can not respond.

Strongly disagree 1 2 3 4 5 strongly agree

19. My child's room is quiet enough for him/her to rest.

Strongly disagree 1 2 3 4 5 strongly agree

20. The health care providers in the PICU keep me well informed about my child's condition.

Strongly disagree 1 2 3 4 5 strongly agree

21. I find the PICU nurses do not really listen to my opinion about my child's needs.

Strongly disagree 1 2 3 4 5 strongly agree

22. I feel the PICU physicians do not keep me completely informed regarding procedure results.

Strongly disagree 1 2 3 4 5 strongly agree

23. I am satisfied with how much the PICU doctors have told me about my child's expected outcome.

Strongly disagree 1 2 3 4 5 strongly agree

24. Healthcare providers in the PICU keep me informed regarding planned tests and procedures.

Strongly disagree 1 2 3 4 5 strongly agree

Appendix B

**Demographic Survey**

Please answer the following questions.

1. Parental Gender (please circle one) female male

2. Ethnicity (please circle one).

American Indian Asian American Black American

Caucasian American Hispanic American Other

3. Parental Age

\_\_\_ younger than 20 years

\_\_\_ 20 –30 years

\_\_\_ 31-40 years

\_\_\_ older than 40 years

4. How many times has your child been in this PICU? \_\_\_\_

5. How long has your child been in the PICU this admission?

\_\_\_ 2 days or less

\_\_\_ 3 – 7 days

\_\_\_ 8 – 14 days

\_\_\_ more than two weeks

6. Estimate of household family income per year:

- less than \$20,000
- \$20,000 - \$40,000
- \$40,000 - \$80,000
- more than \$80,000

7. Education level:

- Less than High School
- GRE
- High School Diploma
- College
- Graduate School

A. What did you like the most about your child's stay in the PICU?

B. What did you like the least about your child's stay in the PICU?

C. What would you change?

*Appendix C*

McPherson's Permission

Appendix D

Expedited Review Request

February 15, 2003

Marshall University  
Institutional Review Board  
401 11<sup>th</sup> St., Suite 1300  
Huntington, WV 25701  
Trula J. Stanley  
(304) 696-7320

Dear Dr. Driscoll,

Please accept my research proposal for Parent Satisfaction in the Pediatric Intensive Care Unit for an expedited review. Enclosed you will find a copy of the proposed tool, an abstract of the proposed study and written permission from the PICU Nurse Manager, Donna Shivley, to conduct this survey in her unit.

Thank you for your consideration.

Sincerely,

Victoria S. Koontz, MSN