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Development of the Family Nurse Caring Belief Scale (FNCBS)

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Measurement of family nursing practice phenomena needs particular attention. This study develops a new instrument, Family Nursing Caring Belief Scale (FNCBS), that measures nurse attitudes regarding provision of family-sensitive care to families in crisis and establishes initial psychometric properties. Classical test theory was used to construct a discriminative, summative instrument for measuring nurse attitudes. Internal consistency reliability in a randomly selected sample \( N = 163 \) of pediatric intensive care unit and neonatal intensive care unit nurses was estimated at .81 (Cronbach’s \( \alpha \)) and .78 (Guttman split half). A four-factor structure was revealed: ethical caring practices, systems orientation to family, child advocacy, and normalizing milieu. The FNCBS demonstrated concurrent \( (r = .57) \) and criterion-related validities. The FNCBS demonstrated sound psychometric properties with a child-rearing population of families and has the potential for future use in family nursing research, education, and practice. It requires further assessment before testing with an adult population.

Keywords: nursing; instrumentation; methods; family care; interpersonal relationships

Measurement in nursing has been an identified priority for at least the past two decades. This is in part because of the increasing dependence on research to direct practice, a growing emphasis on outcome-based practice, and the need to empirically determine clinically important constructs in nursing science. In family nursing, many of these constructs, borrowed from other disciplines, have served to provide the foundation for our thinking and related measures for our research. For example, family nursing investigations have utilized well-known standardized measures of family stress, coping,
and functioning (Abidin, 1995; Antonovsky, 1994; Berry & Jones, 1995; McCubbin, Olson, & Larsen, 1981; Miller et al., 1994; Smilkstein, 1978) held in great respect for both their substantive quality and their psychometric characteristics and widely used in many social science applications. However, although appropriate for some applications, these measures were not developed to assess families experiencing health-related stresses that are unique to family phenomena in health care, particularly when the health phenomenon is critical illness, found by nurse scientists to be singularly stressful for families.

Nurse scientists have focused on these phenomena more intently during the past two decades (Eggenberger & Nelms, 2007; Krumwiede et al., 2004; LeGrow & Rossen, 2005; Moules, 2000; Mu & Tomlinson, 1997; Paavilainen, Astedt-Kurki, Paunonen-IImonen, & Laippala, 2001; Tian, Li, & Xie, 2005; Tomlinson, Kirschbaum, Tomcyk, & Peterson, 1993) and developed measures for assessing family health-related stressors (Astedt-Kurki, Tarkka, Paavilainen, & Lehti, 2002; Friedemann, Astedt-Kurki, & Paavilainen, 2003; Tomlinson & Harbaugh, 2004). Further development of family nursing practice with families in critical illness requires development of measures that reflect the realities of nursing practice with families in these clinical situations. Clinical validity of measurement is particularly important when the goal is enhancing family outcomes through nursing practice during critical illness of a family member.

This article reports on a portion of a larger, long-term study designed to test a family nursing intervention in pediatric critical care. The premise of this study is that nurse attitudes and behaviors regarding provision of family care in a particularly stressful clinical setting (e.g., critical care) can be influenced by an intervention of expert role-modeling at the bedside, followed by guided reflection on practice (Tomlinson, Thomlinson, Peden-McAlpine, & Kirschbaum, 2002). Other results are reported in separate articles (Fitzgerald et al., 2003; Meiers & Tomlinson, 2003; Peden-McAlpine, Tomlinson, Forneris, Genck, & Meiers, 2005).

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The specific construct tested in that project is family-sensitive care, a systems perspective of nursing that is sensitive to both the unique experiences of the family and the interactions between nurse and family capable of reducing family stress in a health crisis.

Family-sensitive care . . . refers explicitly to receptivity to the family experience while utilizing and ordering these perceptions in order to be responsive to emerging family needs. . . . [It] focuses directly on the nurse-family interface and the nurse’s sensitivity to the immediate emotional, role and practical demands of the family in crisis. . . . [It] requires a phenomenological approach that is situationally sensitive, holistic, systemic and intentionally interactive. (Tomlinson, Thomlinson, et al., 2002, p. 162)

This includes the nurse’s sensitivity to the immediate emotional, role, and practical demands of the family and the unique family-sensitive nursing interaction that is the most significant component of nurse caring behavior in a clinical setting (Meiers & Tomlinson, 2003; Tomlinson & Harbaugh, 2004; Tomlinson, Meiers, & Peden-McAlpine, 2002; Tomlinson, Swiggum, & Harbaugh, 1999).

**Purpose and Aim**

The purposes of this project are to develop a new measure to assess nurses’ attitudes regarding provision of family-sensitive care in a stress-laden environment and to establish psychometric properties of the measure to be used as an index for future research. It is hoped that this will contribute to the evolving evidence-based knowledge for family nursing practice focused on the importance of the family–nurse interaction. The long-range goal of the project is to foster ways to assess clinical phenomena in family nursing science and to evaluate the potential use of the Family Nursing Caring Belief Scale (FNCBS) for future family nursing research studies. The instrument developed in this study is based on a sample of child-rearing families.

**Background**

Human care has been viewed as a central focus and essence of nursing practice (Leininger, 1986; Watson, 1988). Care provided to recipients heals, cures, improves health, and contributes to patient satisfaction (Wolf, Miller, & Devine, 2003). Yet it is an example of the nurse’s hidden work that may go
unrecognized by the recipient person or family, except when behaviors and attitudes demonstrative of caring are absent. Even nurses themselves may be unaware of the importance of nurse caring behaviors. Patient–nurse interactions and family–nurse interactions are significant components of nurse caring behavior (Meiers & Tomlinson, 2003; Tomlinson, Meiers, et al., 2002).

Inclusion of family members as recipients of care in the highly technological and complex critical care environment presents a particular challenge. Although it is accepted that family function is altered for a time because of the stress and suffering of hospitalization, less is known about specific ways to decrease stress and alleviate suffering for families (Boss, 2002; Tomlinson, Kirschbaum, Harbaugh, & Anderson, 1996; Wright & Leahey, 1999; Youngblut & Lauzon, 1995). Research findings have demonstrated that nurse caring behaviors toward patients and family members are meaningful components of patient and family satisfaction with care (Hull, 1991; Lamb-Harvard, 1997; Meiers & Tomlinson, 2003). Taken together, these factors make family–nurse caring interactions a rich area for family nursing science investigation. Yet there are few other existing measures that target this area.

Authors on three continents have contributed to initial development of measures that examine the family–nurse interaction, in some instances referring to this as the family–nurse relationship. One such measure was designed by Leahey, Harper-Jaques, Stout, and Levac (1995) to examine nurses’ perceptions about family–nurse relationships following a family systems nursing staff education project in a medical-surgical setting. Another questionnaire, designed by Astedt-Kurki, Tammentie, and Paunonen-Ilmonen (2001), was used to generate knowledge about the interaction between family members of adult patients in medical-surgical settings and nursing staff from the nurses’ perspectives. In 2005, LeGrow and Rossen used the Leahey et al. instrument to elicit

nurses’ and families’ perceptions of their experiences about differences and changes for nurses and families and the family-nurse relationship when an FSN (Family System Nursing) approach was used to guide practice in a pediatric setting through qualitative analysis of nurses’ journaling. (p. 42)

Simpson and Tarrant (2006) developed a measure, the Family Nursing Practice Scale, that targets nurses’ attitudes, critical appraisal of their family nursing practice, and reciprocity in the nurse–family relationship among psychiatric nurses in Hong Kong. The Family Nursing Practice Scale was designed to measure changes in family nursing practice, specifically to evaluate effectiveness of a program aimed at increasing knowledge and skills to change and improve family nursing practice. Authors in all of these studies
concluded that further development of instruments to measure the family–nurse interaction in new populations would be useful. The unique contribution of this study is its attention to care in a new setting, the pediatric critical illness setting, and to a relatively new concept, family-sensitive care (Tomlinson, Thomlinson, et al., 2002, p. 162). Examination of nurses’ attitudes toward provision of family-sensitive care as informed through the family–nurse interaction in a stress-laden environment is an important further step in this area of family nursing science.

Procedures for Instrument Development

Quantitative methods following a norm-referenced approach based on classical test theory were used to construct a discriminative, summative instrument for measuring nurse attitudes (Nunnally, 1978). Items were designed to operationally define nurse attitudes regarding nurses’ influences on the family system and the meanings families derive from such influences in critical illness, the theoretical construct of family-sensitive care. There were two phases in the development of the instrument. Phase I focused on instrument construction and included item development, establishment of concurrent validity, and pilot testing. Phase II included the psychometric assessment of the FNCBS.

Phase I: Instrument Construction

Item Development

There were three main sources used in the development of items for the measure. The first was a simultaneous concept analysis of caring, presence, and nurturance between nurse and family (Meiers, Tomlinson, & Sherman, 1998). This analysis was used to generate initial items for the measure. The second source was findings from the content and hermeneutical analysis of several previous descriptive, qualitative studies in a program of research of family stress in the pediatric intensive care unit (PICU; Mu & Tomlinson, 1997; Tomlinson et al., 1999; Tomlinson & Harbaugh, 2004; Tomlinson, Harbaugh, Kotchevar, & Swanson, 1995; Turner, Tomlinson, & Harbaugh, 1990). The intent of this step was to create items that would increase clinical sensitivity of the measure. Results from these studies gave the authors experiential knowledge from families in the critical care setting and gave family voice to item content.
The third source was an extant instrument to measure perceptions of nurse caring with the individual patient that had reported reliable and valid properties, the Caring Behaviors Inventory (CBI; Wolf, Giardino, Osborne, & Ambrose, 1994). The CBI is a 42-item instrument with 4-point Likert-type scaling (1 = strongly disagree, 4 = strongly agree) grounded in Watson’s (1988) transpersonal caring theory. Items from the CBI were selected and adapted to measure nurse attitudes regarding family care with permission of the author (Z. R. Wolf, personal communication, 2002). The CBI was specifically examined for operational definitions of aspects of caring that may not have been identified with the first two sources (Wolf et al., 1994).

Caring is viewed as the ethical standard by which therapeutic interventions are measured in the CBI. The CBI was initially assessed with a sample of 1,430 nurses and nursing students in the United Kingdom. Cronbach’s alpha coefficient for internal consistency reliability in that sample was reported to be .91 (Cronbach, 1951). Since its initial development, the CBI has been tested with a variety of samples in the United Kingdom and the United States. For instance, it has been used with additional samples of staff nurses (n = 348), with nurse practitioners (n = 200), with patients in an interventional cardiology study (n = 73), with samples of medical (n = 335) and surgical (n = 354) patients, and with ambulatory patients (n = 100). Cronbach’s alpha reliability for the CBI has been reported to be between .95 and .98 in these studies.

**Content Validity**

As part of the item construction and prior to full-scale testing of the measure, content validity was assessed by a panel of experts. The six experts included two pediatric intensive care clinical nurse specialists trained in the family system’s perspective by members of the research team, two doctoral students in family nursing, and two nurse scholars who were experts in theoretical constructs, family nursing science, and measurement. Validity was judged according to specific guidelines provided by Waltz, Strickland, and Lenz (1994) and Lynn (1986). Experts rated each item on a 5-point Likert-type scale (1 = strongly agree, 5 = strongly disagree), first for content relevance to the underlying construct of family-sensitive nursing care and second for the importance of the item. The criterion for keeping the item in the pool was that it was rated at or above .50 agreement among the six experts (i.e., at least three out of the six experts rated the item at strongly agree [1] or agree [2]). Panel members also critiqued the overall instrument for omissions, readability, social desirability bias, and offensive language. Panel critiques
were used to revise or eliminate items because of ambiguous language, because of negative language tone, and/or to ensure that each item was measuring only one concept. For instance, one item, “I believe my interest in helping the family is more a result of my personal concerns than my role as nurse to the child,” was considered to contain more than one key concept and was eliminated.

Pilot Testing

The FNCBS was pilot tested with a convenience sample of 60 PICU nurses. The purpose of pilot testing is to estimate initial content validity from a relevant population of interest (Netemeyer, Bearden, & Sharma, 2003). Respondents were asked to comment on items and offer suggestions for improvement of the instrument. Two additional items were added based on common themes from these comments. These two items addressed the responsibility for basing nursing care on what the child’s illness means to the family and the nurse’s responsibility to vary care based on the family’s perceived situation.

Description, Administration, Scaling, and Scoring

Description. The FNCBS is a 27-item instrument that measures nurses’ attitudes regarding the provision of family-sensitive care. It is formatted in black print on the front and back of one single piece of white paper. Instructions for completion are printed in a bordered block at the top of the instrument above the first item. In the upper right-hand corner, there is a lined space for the participant number.

Administration. Participants indicate the degree to which they agree or disagree with each of the 27 statements by circling numbers corresponding to their level of agreement on a scale of 1 to 5. Participants should be able to complete the instrument in 3 to 5 minutes.

Scaling and scoring. Scaling for the measure is Likert type (1 = strongly disagree, 5 = strongly agree). Likert-type scaling was chosen to ask respondents to indicate the degree to which the declarative statement (the root of the item) is true of the attitude toward provision of family-sensitive care (Nunnally, 1978; Spector, 1992). A 5-point scale was chosen to allow a
neutral midpoint where respondents can state that they are undecided about an aspect of care. An undecided response, in this instance, demonstrates lack of support for family-sensitive care and thus is a valuable response. Nine items use a reverse-scoring format to decrease response set bias. Scoring is summative; higher scores indicate nurses’ attitudes that are most family sensitive. Lower scores indicate nurses’ attitudes least oriented toward family-sensitive care. The possible score range for the FNCBS is from 27 to 135.

**Procedures for Instrument Testing, Phase II: Psychometric Testing**

**Sample**

A national U.S. sample of PICU and neonatal intensive care unit (NICU) nurses was used to assess the psychometric properties of the FNCBS developed in Phase I. A randomized sample of 720 participating nurses was drawn from the total population of 2,329 PICU and NICU nurses obtained from the 2002 membership list of the American Association of Critical Care Nurses. There were no exclusion criteria.

**Human Participants Considerations**

The protocols for the study were approved by a university institutional review board. Phase I pilot testing was conducted as a planned secondary data analysis with data from a larger intervention study (Tomlinson, Thomlinson, et al., 2002). During both phases, a cover letter was used to explain the purpose of the study and the procedures for participation. Participants were assured of anonymity in that all data were reported as group data and individuals were not identified. Measures to ensure confidentiality included assigning coded numbers to the questionnaires instead of using names. Voluntary return of the measures by post was considered to be informed consent.

**Procedures**

A cover letter explaining the study, risk, benefit, and names of personnel to contact with questions or concerns was sent with each data packet to potential participants. Steps taken to ensure confidentiality and privacy of
participants were also explained in the cover letter. This letter also contained instructions for returning the measures in the enclosed researcher-addressed envelope. Participants were asked not to include their name or any identifying information in the return data packet.

In addition to the cover letter, each data packet contained a demographic survey, the measure to be tested, and measures used for the purpose of testing concurrent validity, the Family Caring Scale (FCS; Tomlinson, Meiers, et al., 2002) and the CBI (Wolf et al., 1994). No reminders or follow-up requests were sent after the initial mailing.

A total of 163 nurses responded to the survey on the first request (a return rate of 14%). This sample size was deemed representative of the population from which it was drawn, except in the area of education level (see Table 1). The sample size was also deemed sufficient for validity testing with a factor analysis using a ratio of 5 respondents per item, as suggested by Ferketich (1990), and was within the range of 3 to 50 participants per item suggested by Knapp and Brown (1994). It was also a sufficient sample size for reliability estimation (Spector, 1992). Therefore, no follow-up was done with the population to increase sample size.

Reliability Testing Approach

Tests for internal consistency were conducted. The tests used were Cronbach’s alpha (Cronbach, 1951) and the Guttman split-half reliability. Test–retest reliability was not estimated.

Validity Testing Approach

Concurrent validity. Concurrent validity, a dimension of construct validity (Burns & Grove, 1993), was tested by correlating the score of the FNCBS with two measures previously used in studies of nurses’ caring attitudes, the CBI (Wolf et al., 1994) and the FCS (Tomlinson, Thomlinson, et al., 2002), using Pearson product-moment correlation testing. Data obtained from all three measures are, strictly speaking, ordinal level and would seem inappropriate for use in inferential testing. However, accumulated experience in psychology and other behavioral sciences supports applying interval-based analytic methods to scales yielded by Likert-type response formats (DeVellis, 1991; Nunnally, 1978). The majority of behavioral researchers hold this perspective.
The CBI is a 42-item instrument on which participants, who may be nurses or patients, rate caring words on a 4-point Likert-type scale. The orientation of the scale is toward attitudes regarding individual nurse–patient interactions,

<table>
<thead>
<tr>
<th>Sample Variable</th>
<th>Sample Subcategory</th>
<th>Sample Statistic</th>
<th>Sample Frequency</th>
<th>Sample Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of sample members</td>
<td>M</td>
<td>41.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mdn</td>
<td>42.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>45.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Range</td>
<td>21-57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>6</td>
<td>9.0</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>155</td>
<td>96.3</td>
<td>91.0</td>
</tr>
<tr>
<td>Race</td>
<td>Caucasian</td>
<td>133</td>
<td>82.1</td>
<td>83.0</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>14</td>
<td>8.6</td>
<td>10.0</td>
</tr>
<tr>
<td></td>
<td>African American</td>
<td>6</td>
<td>3.7</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>5</td>
<td>3.1</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>All other</td>
<td>3</td>
<td>1.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Highest nursing degree</td>
<td>Diploma</td>
<td>17</td>
<td>10.5</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>Associate’s degree</td>
<td>22</td>
<td>13.6</td>
<td>23.0</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s degree</td>
<td>96</td>
<td>59.3</td>
<td>69.0</td>
</tr>
<tr>
<td></td>
<td>Master’s of science</td>
<td>25</td>
<td>15.4</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
<td>1</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Workplace</td>
<td>NICU</td>
<td>37</td>
<td>22.8</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>PICU</td>
<td>101</td>
<td>62.7</td>
<td>—a</td>
</tr>
<tr>
<td></td>
<td>NICU and PICU</td>
<td>8</td>
<td>4.9</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>8</td>
<td>4.9</td>
<td>—</td>
</tr>
<tr>
<td>Family nursing in formal</td>
<td>Yes</td>
<td>61</td>
<td>37.7</td>
<td>—</td>
</tr>
<tr>
<td>education</td>
<td>No</td>
<td>93</td>
<td>57.4</td>
<td>—</td>
</tr>
</tbody>
</table>

Note: N = 163.

a. These data are not included in the AACN Membership Profile (2004).
which were believed to be congruent with the orientation of the FNCBS. The CBI has demonstrated internal consistency, with an alpha coefficient reported at .83 and test–retest reliability (Pearson’s $r$) recorded at .83. It has demonstrated reliability and validity. This measure has five dimensions of nurse caring: attentiveness to the other’s experience, professional knowledge and skill, positive connectedness, assurance of human presence, and respectful deference to others. All are at least partially related to concepts underlying the FNCBS (Wolf et al., 1994).

The FCS (Tomlinson, Meiers, et al., 2002) measures nurses’ attitudes and knowledge of family inclusion in nursing care, nurses’ perceptions of family–nurse role ambiguity, and nurses’ attitudes toward rights of families in pediatric intensive care. The FCS is a 14-item, 5-point Likert-type scale used on a sample ($n = 60$) of nurses participating in a family intervention and family nursing practice study. Reliability of the FCS in that study was assessed at .73 (Cronbach $\alpha$), and content validity was estimated by a panel of pediatric nursing experts and doctoral students in family nursing.

Construct validity. A principal components factor analysis with varimax rotation was used to evaluate the internal structure of the instrument and to reduce the instrument to the most parsimonious number of significant factors. The factor analysis is a significant step in the evaluation both to determine if the factor structure is congruent with the underlying theoretical assumptions of the instrument and to evaluate the strength of the items (Nunnally, 1978; Nunnally & Bernstein, 1994). Diagnostic parameters used to assess the appropriateness of the factor analyses were correlation matrices to assess multicollinearity ($p < .00001$) and measurements of sampling adequacy (Kaiser-Meyer-Olkin [KMO] > .6 and Bartlett’s Test of Sphericity) to assess $p$ value ($< .05$). The number of factors in the final solution was based on the criterion that the factor have an eigenvalue greater than 1. Scree plot analysis was conducted based on the slope of the eigenvalues to determine the number of factors in the factor structure (Burns & Grove, 1993).

Results

Reliability

Summative scores on the FNCBS ranged from 76 to 123, with a mean of 105 and standard deviation of 8.63. Cronbach’s alpha was estimated at .81, indicating that the measure has acceptable internal consistency and that it
will reflect fine discriminations in levels of the construct of family-sensitive care. Homogeneity of the measure was determined, by the Guttman split-half reliability, to be at an acceptable .78. Taken together, these tests indicate that the FNCBS is a reliable measure of the concept of family-sensitive care with the sample used in this study (Burns & Grove, 1993).

Validity

Concurrent validity. Using Pearson’s $r$, the following values were obtained as estimates of concurrent validity: .57 ($p < .01$) when comparing the FNCBS with the FCS and .38 when comparing the FNCBS and the CBI ($p < .01$). A post hoc analysis using analysis of variance demonstrated that nurses with advanced degrees in nursing had higher sum scores on the FNCBS than did nurses with a 2-year prelicensure education ($p < .05$). This suggests a type of criterion-related validity based on the assumption that nurses with graduate education would most likely have had greater exposure to some of the complex concepts in the instrument than would non-bachelor’s-level nurses.

Construct validity. A factor analysis was conducted to test for construct validity. The result was a four-factor solution with eigenvalues greater than 1. Variables (items) were considered to load on a factor if their factor loading was greater than or equal to .40. Factors with fewer than three variables loading greater than or equal to .40 were eliminated. In all, 25 items loaded on four factors (range = 4 to 9 items on each factor), accounting for 43.3% of the variance. The interrelationships of factors were examined to determine if any factors were highly correlated, and no multicollinearity was noted. Correlation coefficients between factors ranged from .36 to .55 ($p < .01$).

Four-factor structure. The four factors emerging from this analysis were evaluated both independently and jointly by the first and second authors and were labeled based on content of items in each factor (see Table 2). Factor I indicates aspects of ethical caring in an empathetic milieu (Ethical Caring Practices). Items in Factor II reveal an obligated receptivity to collaborative practice in which the family directly influences nursing practice (Orientation to Family). Factor III items imply a theme of advocating for the child in the context of the family (Child Advocacy). Finally, the items in Factor IV indicate dimensions of supporting the family members in normalizing their role, such as decision making, planning, and coordinating care (Normalizing Milieu).
### Table 2
Factor Loadings for the Family Nurse Caring Belief Scale (Principal Component Analysis With Varimax Rotation)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Sensitivity toward families’ perceptions is not an important aspect of my job.</td>
</tr>
<tr>
<td>18</td>
<td>I am not obligated to take care of the family.</td>
</tr>
<tr>
<td>14</td>
<td>I am not as responsible for the care of the family as for the patient.</td>
</tr>
<tr>
<td>21</td>
<td>My relationship with the family has no important therapeutic effects on them.</td>
</tr>
<tr>
<td>17</td>
<td>Advocating for the family is not an essential aspect of my professional responsibility.</td>
</tr>
<tr>
<td>15</td>
<td>The physical care of the child is more important than understanding the experience of the family.</td>
</tr>
<tr>
<td>23</td>
<td>Seeking the family’s input when making decisions about care is not essential.</td>
</tr>
<tr>
<td>12</td>
<td>It is important for me to establish a relationship with the family so they can trust me with their child.</td>
</tr>
<tr>
<td>16</td>
<td>Explaining technology to the family will not increase their involvement in the child’s care.</td>
</tr>
<tr>
<td>25</td>
<td>Families have the right to say what is important to them in planning care.</td>
</tr>
<tr>
<td>22</td>
<td>My attitude towards the family influences my understanding of the family situation in PICU/NICU.</td>
</tr>
<tr>
<td>27</td>
<td>It is my responsibility to change my plan of care over time to incorporate what the family feels is right for them given their perspective of the situation with the child.</td>
</tr>
<tr>
<td>20</td>
<td>I need to support the family to stay involved with their child.</td>
</tr>
<tr>
<td>26</td>
<td>It is my responsibility to base nursing care on the information I gain about the meaning of the child’s illness as a whole.</td>
</tr>
<tr>
<td>8</td>
<td>No matter how sick the child is, he or she needs to be treated as unique and individual.</td>
</tr>
<tr>
<td>9</td>
<td>I should try to help parents be active in caring for their child.</td>
</tr>
<tr>
<td>3</td>
<td>I should be as honest as possible in keeping the family of the critically ill child informed about the things they need to know.</td>
</tr>
<tr>
<td>4</td>
<td>When nurses utilize the family as a significant source of information, the child’s care is improved.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1</td>
<td>Families have the right to know their child is being treated as normally as possible within the confines of the illness and technology.</td>
</tr>
<tr>
<td>7</td>
<td>It is my responsibility to provide for family well-being when they are in the hospital with their child.</td>
</tr>
<tr>
<td>11</td>
<td>Being available to the family is not an essential part of care in the PICU/NICU.</td>
</tr>
<tr>
<td>10</td>
<td>Explaining technology to families will help them make better decisions.</td>
</tr>
<tr>
<td>13</td>
<td>Describing the typical projected course of events for the child helps the family in planning for family activities.</td>
</tr>
<tr>
<td>6</td>
<td>Helping the family plan the care day so they can coordinate it around other family activities is not my responsibility.</td>
</tr>
<tr>
<td>2</td>
<td>Knowing the family is not essential in order for me to care for them.</td>
</tr>
<tr>
<td>5</td>
<td>My interest in helping the family is more a result of my personal concerns than my role as nurse to their child.</td>
</tr>
<tr>
<td>24</td>
<td>Parents should be able to count on updates on their child’s condition when they are not at the hospital.</td>
</tr>
</tbody>
</table>

Percentage of explained variance 23.7 7.9 6.0 5.6
Total variance explained by four factors 43.2
Cronbach’s alpha if FNCBS15 is removed .84

Note: Numbers in parentheses are factor loadings at .4 or greater on more than one factor.
a. Factor to which variable assigned based on conceptual fit with other items in the factor.
Discussion

The theoretical factor profile of the FNCBS is consistent with the underlying theoretical framework and the construct of family-sensitive care in a sample of child-rearing families. It reconstructs realms of ethical caring, a family systems orientation, with advocacy for the child as expected. It also reconstructs concern with the importance of nurses’ role behaviors necessary to improve the caring environment. This profile elaborates on the concept of nurses’ sensitivity to the systemic and immediate emotional, role, and practical demands on the family, reflected in its focus on interaction and the environment. Taken together, these realms suggest that the instrument measures some of the elemental dimensions of our construct of family-sensitive care: intentional interactivity, situation sensitivity, and sensitive attention to a holistic family nursing practice (Tomlinson, Meiers, et al., 2002). As it stands, the FNCBS has demonstrated sound psychometric properties with a child-rearing population. It requires further assessment before it can be used with adult or other populations.

Limitations

Although the sample was randomly selected, there was a relatively low sampling ratio and no information regarding the nonresponders. Thus, self-selection bias cannot be known. However, demographic data suggest that responders were fairly representative of NICU and PICU nurses relative to age and education. A second limitation is some weakness in establishing concurrent validity, a significant problem with the CBI. However, it should be noted that the CBI was developed to measure individual-level data. Thus, the low correspondence may be in part a function of the problem of utilizing individual-level measures to assess a family-level concepts, a significant problem in initiating new family measures. Finally, the factor structure accounted for only 43.34% of the total variance. Collecting more data is necessary to strengthen the factor structure. In a sense, construct validity is never completely established; use in many subsequent studies is necessary to continue testing construct validity (Netemeyer et al., 2003).

Conclusion and Implications for Nursing

The FNCBS has utility in its present state to provide an assessment of attitude change in nurses in complex family care situations prior to and after
interventions designed to improve nursing practice with families, especially in caring for families in crisis. With minor modifications, the FNCBS may also have potential for use in adult critical care situations and should be tested in these settings. Finally, the measure could be used in educational settings as a means of assessing change in attitudes of students regarding family-sensitive nursing in theory courses and clinical practice designed to build skills in family systems nursing approaches and influence clinical care outcomes.

Note

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References


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