

3-2013

The Development and Psychometric Testing of the Supportive Needs of Adolescents Breastfeeding Scale

Jane S. Grassley
Boise State University

Becky S. Spencer
Baylor University

Deborah Bryson
Medical City Dallas Hospital

This is the peer reviewed version of the following article:

Grassley, J.S.; Spencer, B.S.; & Bryson, D. (2013). The development and psychometric testing of the supportive needs of adolescents breastfeeding scale. *Journal of Advanced Nursing*, 69(3), 708-716., which has been published in final form at <https://doi.org/10.1111/j.1365-2648.2012.06119.x>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Use of Self-Archived Versions. This article may not be enhanced, enriched or otherwise transformed into a derivative work, without express permission from Wiley or by statutory rights under applicable legislation. Copyright notices must not be removed, obscured or modified. The article must be linked to Wiley's version of record on Wiley Online Library and any embedding, framing or otherwise making available the article or pages thereof by third parties from platforms, services and websites other than Wiley Online Library must be prohibited.

Development and Psychometric Testing of the Nurses' Confidence Scale: Unique Families

Jane S. Grassley
Boise State University

Melissa Ward
Vibra Health

Rick Tivis
Idaho Center for Health Research

Author Bios

Jane S. Grassley, PhD, RN, IBCLC, is a professor emeritus, School of Nursing, Boise State University, Boise, ID.

Melissa Ward, MSN, RN, is the Chief Clinical Officer, Vibra Health, Boise, ID.

Rick Tivis, MPH, is the Assistant Director of the Idaho Center for Health Research, Meridian, ID

Acknowledgement: The authors acknowledge Dixie Weber, MSN, RN, National Director of Health Programs, Family to Family Support Network, Boise, ID for her support.

Disclosure: The authors report no conflict of interest or relevant financial relationships.

Precis: The Nurses Confidence Scale: Unique Families is a new tool with which to measure the confidence of perinatal/neonatal nurses in providing sensitive, specific care to complex/nontraditional families.

Abstract

Objective: To develop and evaluate an instrument designed to measure the confidence of nurses in their ability to provide neutral, compassionate care to unique families in perinatal settings: the Nurses' Confidence Scale: Unique Families (NCSUF).

Design: Prospective instrument development and psychometric study.

Setting: Health system in the Mountain West.

Participants: Convenience sample of 62 perinatal/neonatal nurses.

Methods: We developed a two-part scale to measure the confidence of nurses in their ability to care for complex/nontraditional families, i.e., unique families. Part A was focused on nursing care behaviors for any *unique family*; Part B was focused on providing care to seven specific unique family populations. Five experts in perinatal nursing or adoption evaluated the scale's content validity. We tested the psychometric properties of the scale using item analysis, reliability analysis, and exploratory factor analysis.

Results: The content validity index was 0.82. Cronbach's alpha coefficient estimate of internal consistency for Part A was .92. Principal components analysis resulted in two factors that explained 64% of the total variance: skills and resources (Cronbach's alpha coefficient = .89) and awareness and sensitivity (Cronbach's alpha coefficient = .87). Part B had a Cronbach's alpha coefficient of .90. Parts A and B demonstrated a strong positive relationship with one another ($r = 0.77$). The general self-efficacy measure was strongly and positively correlated with Part A ($r = 0.81$) and moderately and positively correlated with Part B ($r = 0.48$).

Conclusion: The Nurses Confidence Scale: Unique Families is a new tool with which to measure the confidence of perinatal/neonatal nurses in providing sensitive, specific care to complex/nontraditional families. Results of our psychometric evaluation supported initial acceptable reliability and validity of the scale.

Keywords: psychometrics, quality of health care, obstetric and neonatal nurses, social discrimination

Callouts

1. The need to prepare nurses who can confidently create care environments in which all unique families feel welcomed and safe has been documented.
2. Findings from the factor analysis suggested two underlying components of nurses' confidence in providing care for unique families: skills and resources and awareness and sensitivity.
3. Clinical nurse educators could use the NCSUF scale to guide discussions that facilitate nurses' awareness of their values and beliefs related to unique families.

Nurses who practice in perinatal/neonatal settings provide care to increasingly complex families with specific and unique needs. As defined within the context of this study, *unique families* are complex or have non-traditional family structures. For example, they may be refugees; members may be incarcerated or experience substance use disorder; they may use adoption or surrogacy arrangements; or members may identify as lesbian, gay, bisexual, transgender, queer, or questioning (LGBTQ). The structure of the U.S. health care system often creates barriers for unique families. Among health care providers, lack of understanding and awareness of personal biases about families who do not fit the traditional family paradigm can lead to insensitive language and inconsistent approaches to care (Nisly et al., 2018). Current evidence suggests that unique families often experience health care as inaccessible, unwelcoming, and possibly unsafe (Kingsbury & Chatfield, 2019; Kramlich, Kronk, Marcellus, Colbert, & Jakub, 2018; Nisly et al., 2018). Nurses have a responsibility to be sensitive to the needs of all families, protect their rights to safe and accessible health care during the childbearing continuum, and respect their worth as individuals regardless of their lifestyle choices (American Nurses Association, 2015). Specific policies and staff education can increase nurses' confidence in their ability to provide appropriate care to unique families (Nisly et al., 2018).

Nurses at St. Luke's health system recognized the need for a system wide strategy to prepare nurses who were confident in their abilities to create care environments in which all unique families felt welcomed and safe. To facilitate this process, we identified the need for an instrument with which to measure nurses' confidence in providing such care. Confidence, which is defined as the "perception that one is competent and capable of fulfilling particular expectations" (Bandura, 1982, p. 122), influences nursing care. For example, Rafiei et al. (2018) found that more confident nurses showed more positive attitudes about the presence of family members during patient resuscitation (Rafiei et al., 2018). Therefore, the purpose of our study was to develop and evaluate an instrument designed to measure the confidence of nurses in their ability to provide neutral, compassionate care to unique families in perinatal settings.

Background

We reviewed the literature for insights into the specific needs of the unique families most often encountered by health care providers. Unique families may have members with substance use disorder; who are incarcerated; or who identify as LGBTQ. These families may experience refugee status, surrogacy, or adoption. Our research helped us identify nurse behaviors important to the care of unique families during the childbearing continuum. For example, women with substance use disorder often are reluctant to seek prenatal care, particularly if they live in states where drug use during pregnancy qualifies as child abuse (Hui, Angelotta, & Fisher, 2017). Although rates of substance use during pregnancy are comparable across racial and ethnic groups, women of color and women with low income are more likely to be reported (Hui et al., 2017). In addition, few states offer adequate drug treatment programs during pregnancy (Hui et al., 2017). However, women with substance use disorder who felt respected and understood by their health care providers were much more likely to endure logistical challenges such as transportation difficulties to receive care (Kramlich et al., 2018). Breastfeeding education and support throughout pregnancy and the postpartum period are crucial for these women (Krans et al., 2018). Because many women with substance use disorder see pregnancy as a new start with their infants, they are motivated to seek treatment and stop using drugs (Huang, Atlas, & Parz, 2012).

Women who are incarcerated face many challenges during pregnancy and the transition to motherhood. They usually come to the hospital for childbirth with minimal psychosocial support and education about pregnancy, childbirth, and postpartum adaptation (Ferszt & Clarke, 2012). Subsequently they enter labor unprepared, often without support (Fritz & Whitacre, 2016). The use of restraints during labor and in the early postpartum remains a common practice in the United States (Goshin, Sissoko, Neumann, Sufrin, & Byrnes, 2019). Shackling interferes with women's ability to experience a positive, safe birth and to hold and care for their infants in the early postpartum (Goshin et al., 2017). The impending separation from their newborns at hospital discharge can place them at higher risk for postpartum depression (Kotlar et al., 2015). Nurses can help women manage these challenges through encouraging their full participation in the care of their newborns and supporting breastfeeding (Huang et al., 2012; Paynter & Snelgrove-Clarke, 2017). Breastfeeding, even briefly, can be significant to the development of a positive mother-child relationship and represents an opportunity for incarcerated women to redefine their identities as mothers and engage in healthier lifestyles choices (Huang et al., 2012).

The number of refugees is on the rise worldwide and currently estimated to be 25.9 million people (Kingsbury & Chatfield, 2019; USA for United Nations High Commissioner for Refugees [UNHCR], 2019). Women who are refugees face many challenges when they seek care during pregnancy. They must navigate unfamiliar languages and foreign cultural practices, adapt to different maternity care systems, and manage new health care experiences. In addition, they are confronted with health care providers who are inadequately trained to understand and address their needs as refugees (Kingsbury & Chatfield, 2019). Once seen as a vulnerable population in need of protection, refugees are now often depicted as dangerous criminals, which can influence the care they receive (Rousseau, Oulhote, Ruiz-Casares, Cleveland, & Greenaway, 2017).

Families involved in surrogacy and adoption arrangements navigate complex transition processes during the perinatal period. Surrogacy is the "process in which a woman carries a pregnancy to term with the intention to relinquish the child to the intending parent(s)" (Blake et al., 2017, p. 860). State laws regarding surrogacy vary widely. For example, compensation of the surrogate is legal in some states and illegal in others. Some states require that the intended parents be married (Blake et al., 2017). Adoption can be even more complex and is governed by state laws that may require an extensive process to determine the suitability of the prospective parents (van Zyl & Walker, 2018). Foli (2012) described the importance of nurses' understanding of the unique dynamics and contexts of adoption for the prospective parents and the birth mother. The prospective parents must navigate the complex transition of the infant from the birth mother to themselves. Birth mothers need emotional support as they manage their grief and feelings of uncertainty about their decisions. However, nurses often do not have the knowledge and skills needed to confidently care for these families (Foli, 2012).

Individuals who identify as LGBTQ often are involved in surrogacy or adoption arrangements. Before 2016 and legalization of same sex marriage, adoption by LGBTQ couples was illegal in many states (Blake et al., 2017). Currently, several states have passed laws that allow agencies to discriminate against gay couples based on religious freedom and/or marital status. Therefore, surrogacy may be a more desirable and attainable choice than adoption (Blake et al., 2017). Nurses may struggle with their personal objections regarding families whose lifestyle choices differ from their own. Lack of awareness about issues related to sexual orientation and gender identity can lead to discriminatory remarks and insensitive nursing care (Ruud, 2018). In a meta-synthesis of qualitative research (Dahl, Fylkesnes, Sørli, & Malterud, 2013), investigators found that lesbian couples had difficulty finding prenatal care that felt equitable. Same sex partners felt invisible and vulnerable in birth settings because nurses did not acknowledge their presence as co-parents (Dahl et al. 2013). This lack of sensitivity is a common experience reported by parents who identify as LGBTQ (Whatley, Cave, & Breneiser, 2016).

Our literature review highlighted the complexity of perinatal care for unique families and the need to prepare nurses who are confident in their abilities to create care environments in which all unique families feel welcomed and safe. To address this issue, the Women's Services leaders of our health system identified neutral, compassionate care (intentional, individualized, perinatal nursing care to create a neutral space in which families can make informed decisions about their care and the care of their newborns) as the underlying focus of the Unique Families Program (Weber, 2018). We developed the Nurses' Confidence Scale: Unique Families (NCSUF) to measure the confidence of nurses in their ability to provide neutral, compassionate care to unique families in perinatal settings.

Theoretical Framework

Self-efficacy theory provided the framework for development of the NCSUF scale. Bandura (2006) defined self-efficacy as individuals' perceived belief in their ability to successfully perform and manage tasks within a specific context. Confidence or self-efficacy to perform a given task is related to having the skills to do it (Bandura, 2006). In the context of providing optimal care to unique families in perinatal settings, nurses' confidence is influenced by their abilities to identify and evaluate their values and beliefs about a population and to adapt their care approaches to the needs of specific unique families (Foronda, Baptiste, Reinholdt, & Ousman, 2016; Nisly et al., 2018; Ruud, 2018). Using context-appropriate, sensitive language and definitions is an important skill when interacting with unique families (Nisly et al., 2018; Ruud, 2018). For example, individuals who identify as transgender male have the ability to lactate if they have not had surgical or hormonal intervention. Rather than talking about breastfeeding, nurses can listen and use the individual's own word(s) when referring to infant feeding (e.g., lactation, nursing, chest feeding; Wolfe-Robatis & Spatz, 2015).

Methods

To determine the usefulness of the Nurses' Confidence Scale: Unique Families (NCSUF), we conducted a prospective instrument development and psychometric study in three phases: instrument development, content validation, and psychometric evaluation.

Phase One: Instrument Development

We defined unique families as families who are complex or have non-traditional family structures as discussed above. Informed by the literature; our experience with and guidelines for care of unique families; and the definition of neutral, compassionate care, we developed 22 items (see Table 1). Self-efficacy theory provided the framework for these items. Following Bandura's (2006) guidelines, we constructed items that began with "I can" as the stem. Participants rated their level of confidence in their ability to perform a specific behavior related to care of unique families using a five point Likert scale (1=*not confident at all* to 5=*very confident*). Examples of items included the following: "I can manage the presence of extended family members or security guards on the unit" (incarcerated women); "I can understand how my own experience may influence my capacity and willingness to engage with families" (substance use disorder). Our next step was to evaluate the content validity of the scale.

Phase Two: Content Validation

Content validity is defined as "the extent to which the items on a measure assess the same content or how well the content material was sampled" (Rubio, Berg-Weger, Tebb, Lee, & Ruach, 2003, p. 94). To determine content validity, five experts reviewed each scale item for relevance, clarity, and importance. The panel included an expert in adoption who had worked with the health system, a perinatal nurse with expertise in gender studies, and health system perinatal nurse educators who were responsible for implementing the Unique Families Program on their units. The educational level of the experts ranged from bachelor's degree to PhD. The content validity index (CVI) was calculated using the method discussed by Rubio et al. (2003). The panel experts evaluated the relevance of each item using a 4-point ordinal rating scale (1 = irrelevant; 2 = unable to assess the relevance without item revision; 3 = relevant with minor alteration; and 4 = extremely relevant item). Four items received a rating of 1 or 2 from the majority of reviewers and were removed. The CVI then was calculated on the remaining 18 items by dividing the number of experts who scored an item's relevance as a 3 or 4 by the total number of experts. The CVI of the measure was estimated as the average CVI of the items, which was .82 and determined to be adequate (Rubio et al., 2003).

The reviewers also provided helpful recommendations related to clarity and importance of the remaining 18 items. Eight items remained unchanged; 10 were revised. One item was revised to be more universally applicable across populations. "I can involve the infant's intended care provider in the infant's discharge planning (i.e. birth mother, prospective adoptive parents or infant guardian) was revised to: "I can include all persons in discharge planning who will be caring for or parenting the infant." Another revision involved a minor word change. "I can use appropriate language and definitions" became "I can use accurate language and definitions." Eight items (e. g. four pairs of similar items) were combined into four items. For example, "I can identify guidelines for providing care to unique

families” and “I can locate guidelines on my nursing unit for providing care to unique families” were revised to read: “I can identify, locate, and use our health system’s policies, processes, and protocols related to care of unique families.”

The revised NCSUF consisted of 14 nursing care behaviors appropriate for any unique family. However, we recognized that nurses’ level of confidence could vary when providing care to families within a specific population. For example, a nurse might feel very confident with families involved in adoption arrangements but be less confident caring for women who were incarcerated. We developed Part B to measure nurses’ confidence caring for seven populations of unique families. Evaluation of the revised instrument’s psychometric properties was our next step.

Phase Three: Psychometric Evaluation

Setting and Population. The setting for this phase of the study was a health system located in a Mountain West state. In 2015 the perinatal nursing staff were offered a workshop about providing care for families involved in adoption arrangements, which initiated the health system’s Unique Families Program. Over the next 4 years, the program was expanded to include other populations of unique families; policies and procedures related to their care were developed. At present, each Women’s Services unit and Neonatal Intensive Care Unit (NICU) has a binder with all policies and procedures related to care of unique families.

Inclusion criteria for study participation included licensure as a registered nurse (RN) and working as a nurse on a perinatal unit (e. g. antepartum, intrapartum, or mother/infant unit) or NICU in one of the health system’s four largest hospitals. Other staff (e.g. licensed practical nurses, certified nursing assistants) was excluded because some of the tool items were beyond their scopes of practice. We anticipated recruiting a minimum target sample of 70 participants to satisfy the recommended sample size per scale item for an exploratory factor analysis (e. g. 14 items \times 5 = 70) (Gorush, 1983).

Procedures. We began collecting data after we obtained institutional ethics review board approval from the health system. We collected data via an anonymous survey over a 3-week time frame in January, 2019. All registered nurses (N = 475) who worked on a Women’s Services unit or NICU in one of the hospitals received an email invitation to participate in the study through REDCap, a secure online data management system (Harris et al., 2009). The email contained a brief description of the study with a link to access the informed consent form and the anonymous survey in REDCap. We sent two reminder emails, one at 5 days and another at 2 weeks. We chose to use a web-based survey as a less expensive and potentially more effective method than a paper survey in recruiting participants and collecting data since all employees had their own email address (McMaster, LeardMann, Speigle, & Dillman, 2017).

The on-line survey contained three sections. In Part 1 we collected information about nurse characteristics such as age group, education, years as a nurse, and years in providing maternity/neonatal nursing care in the health system. We asked participants if they had received any education about unique families and where that education had occurred. In Part 2, participants responded to the Nurses’ Confidence Scale: Unique Families (NCSUF): Parts A and B. Participants rated their level of confidence in their ability to offer specific nursing care behaviors to unique families (Part A: 14 questions) and to specific unique families (Part B: 7 questions). Nurses rated their confidence on a 5-point Likert scale from one (not confident at all) to five (very confident). A higher total score indicated a higher level of confidence. Participants were asked in Part 3 about their general self-efficacy using the PROMIS Short Form v1.0 - General Self-efficacy Scale 4a (Minor, 2017). This instrument is a 4-item measure of perceived self-efficacy, defined as an optimistic self-belief that one can perform a novel or difficult task, or cope with adversity (Schwarzer & Jerusalem, 1995). Respondents rate their level of confidence for each item using a 5-point Likert scale ranging from one (not confident at all) to five (very confident). Item responses are summed for the total score ranging from 4 to 20. The instrument was adapted for the Patient-Reported Outcomes Measurement Information System (PROMIS) from the 10-item General Self-Efficacy Scale (GSE) (Minor, 2017). Schwarzer (2003) reported that alpha estimates ranged between 0.82 and 0.93 and factor analysis demonstrated a single factor solution in studies using the 10-item GSE

Data Analysis. We analyzed the data using SPSS version 23. We used descriptive statistics to summarize participants' characteristics and measures of internal consistency reliability and exploratory factor analysis to evaluate the psychometrics of the NCSUF scale. We computed the internal consistency reliability of Parts A and B with Cronbach's alpha coefficients. We chose a coefficient of 0.70 or higher as the criterion for acceptable reliability for a new instrument (Nunnally & Bernstein, 1994). We determined that items with a corrected item-to-total correlation less than 0.35 did not contribute significantly to the scale's internal consistency (Hinshaw & Atwood 1982). We set a Kaiser-Meyer-Olkin (KMO) measure of 0.6 or higher as the criterion for determining if the correlations were sufficient for principal component analysis (PCA). We first used a direct oblimin rotation to estimate the correlations among factors. If correlations did not exceed 0.32, we planned to use orthogonal rotation to determine factor structure (Tabachnick & Fidell 2007). Criteria for extraction of components from the rotation included scree plots and eigenvalues > 1. We retained items that had factor loading differences substantial enough to discriminate item loadings on different factors (e.g. > 0.15) (Kerns, Turk, & Rudy, 1985).

Results. We sent an online invitation to 475 nurses. A convenience sample of 82 nurses (17%) completed the informed consent and 62 (13%) completed the survey. Most participants were less than 40 years old (61%) and had a Bachelor's degree in nursing (71%) (see Table 2). Of the 23% with an associate degree education, half were over the age of 50. Over 80% of the sample reported more than 5 years of experience as a registered nurse; greater than 40% had been with the organization for 10 years or more. Approximately 75% reported receiving some education about unique families.

The Cronbach's alpha coefficient estimate of internal consistency reliability was 0.93 for Part A and all item-to-total correlations were above 0.35. We then conducted an initial exploratory factor analysis on Part A. The KMO measure of sampling adequacy was 0.86 indicating suitability for factor analysis. The Bartlett's test of sphericity was statistically significant, $\chi^2 = 498.18$, $df = 91$, $p = .000$, indicating that correlations differed significantly from zero. The principal component analysis (PCA) of the 14-item scale extracted two factors with eigenvalues greater than one that accounted for 62% of the variance. Examination of the scree plot supported two factors. The correlation among the factors was greater than 0.32, indicating the appropriateness of the direct oblimin rotation to determine factor structure (Tabachnick & Fidell, 2007). Factor loadings ranged from 0.56 to 0.95 and appeared substantial enough to discriminate loadings on different factors, with the exception of two scale items, which had a difference of less than 0.15 and were eliminated from the final scale (Kerns et al. 1985). The two items, "I can include all persons in discharge planning who will be caring for or parenting the infant" and "I can intervene to minimize the stress experienced by all members of unique families" had loadings of 0.39 and 0.45 and 0.43 and 0.39 respectively. These two items were removed and the factor analysis was repeated on the 12-item scale (See Table 3).

Two factors were extracted that accounted for 64% of the variance of the shortened 12-item scale. Factor one had an initial eigenvalue of 5.6 and accounted for 51% of the variance. Factor two had an initial eigenvalue of 1.5 and accounted for 13% of the total variance. The scree plot showed a leveling off of eigenvalues after two factors. Factor loadings ranged from 0.56 to 0.95; differences between loadings of each item on the two factors were greater than 0.15 (see Table 4). We defined the first factor as the skills and resources needed by nurses to provide confident neutral compassionate care to unique families and the second factor as self-awareness about one's own biases and sensitivity to the needs of unique families. Mean individual item confidence scores ranged from 3.43 (I can locate policies and protocols) to 4.57 (I can identify and manage my internal conflict). Four items had mean individual item scores below four (infant feeding = 3.98; cultural needs = 3.93; accurate language = 3.83; accessing policies = 3.43). The Cronbach's alpha coefficient was 0.92 for the 12-item scale with all items contributing; all item-to-total correlations were above 0.35 (Kerns et al., 1985). The Cronbach's alpha coefficient of the two factor subscales was 0.89 and 0.87 respectively with all item-to-total correlations contributing. The two factors were moderately correlated to each other, $r = 0.53$.

Part B of the scale evaluated nurses' confidence in providing care to seven populations of unique families (see Table 5). Mean individual item confidence scores ranged from 3.77 (refugee) to 4.25 (LGBTQ). The lowest mean individual item confidence scores included the three populations identified as adoption (3.98), incarceration (3.80), and refugee (3.77). The Cronbach alpha coefficient for Part B was 0.90 with item to total correlations from 0.62 to 0.81, which all supported the internal consistency of Part B. Parts A and B were strongly and positively correlated ($r = 0.77$). The PROMIS Short Form v1.0 - General Self-efficacy Scale 4a (Minor, 2017) was used to support construct validity and had a Cronbach's alpha coefficient of 0.93. There was a strong positive correlation between the General Self-efficacy Scale 4a and Part A of the NCSUF, $r = 0.81$, and a moderate positive correlation with Part B, $r = 0.48$.

Discussion

In our evaluation of the NCSUF, participants rated their level of confidence in their ability to offer specific nursing care behaviors to unique families in Part A and to unique family populations in Part B. The two parts of the scale complement one another. The nursing behaviors in Part A are less specific to a unique family population and more universally applicable across populations. Part B addresses the idea that nurses' confidence could vary when caring for differing populations of complex families. For example, a nurse might feel very confident with families involved in adoption arrangements but be less confident caring for women who were incarcerated.

Our psychometric evaluation provided initial evidence to support the internal consistency reliability of Parts A and B of the NCSUF. Findings from the exploratory factor analysis for Part A indicated two underlying aspects of nurses' confidence in providing care for unique families: (1) skills and resources (7 items) and (2) awareness and sensitivity (5 items).

Skills and Resources

Scale items related to skills and resources included facilitating rooming in, collaborating with interprofessional team members and community partners, defining neutral compassionate care, supporting infant feeding, addressing cultural differences, using accurate language, and knowing how to access resources related to policies and procedures. Bandera (2006) identified the importance of skills to development of confidence. The nurses in this study were most confident in their ability to facilitate rooming-in, collaborate with interprofessional team members and community partners, and define neutral compassionate care. However, four of the seven items related to skills and resources had mean individual item confidence scores that were less than four (e.g. facilitate infant feeding, address cultural differences, use accurate language and access policies).

Accessing policies and procedures had the lowest individual item mean confidence score ($M = 3.43$). Providing nurses with a comprehensive handbook of policies and procedures as a resource that they easily can access can facilitate the development of their skills and confidence in providing optimal care to unique families. For example, promoting rooming-in during the postpartum period is a routine practice on mother/infant units (Barrera, Nelson, Boundy, & Perrine, 2018). However, care of unique families may require adaptability of this process. For example, in an adoption arrangement, two families could be present simultaneously on a mother/infant unit: the birth patient and her extended family and the newborn's prospective parents. To provide appropriate care, the nurses need to know how to access the policy or process for arranging a hospital room for the prospective parents so they can participate in care of their newborn.

Awareness and Sensitivity

The second component included nurse behaviors related to awareness of assumptions about unique families and sensitivity to the support needs of unique family members. All five items had mean individual item confidence scores that were over four, which may reflect that 75% of participants indicated they had received some education related to unique families. Education that facilitates self-awareness and sensitivity to unique families can increase nurses' confidence in providing appropriate nursing care (Marshall & Sprung, 2016; Nisly et al., 2018). Awareness of one's assumptions about unique families can increase sensitivity to their support needs, promote an atmosphere of welcome that includes extended family members, and facilitate families' control over decision-making related to their care (Foronda et al., 2016; Fritz & Whiteacre, 2016; Marshall & Sprung, 2016; Nisly et al., 2018). We developed Part B to measure nurses' level of confidence in providing care to specific unique family populations. The nurses were most confident in care of LGBTQ identified families and least confident in caring for incarcerated women and refugee families. As a next step perinatal/neonatal nurse educators in our health system might use this finding to plan staff education that promotes development of skills and resources and an awareness and sensitivity to the specific needs of these populations. Other populations of unique families, like women experiencing domestic violence, could be added to Part B. Nurses also may not encounter all of the listed populations, such as surrogacy arrangements, since this practice is illegal in some areas of the United States (van Zyl & Walker, 2018). However, Part B could be adapted by hospitals to include the unique families appropriate to their region.

Limitations

Although the sample size met minimum requirements for exploratory factor analysis (Gorush, 1983), the survey response rate of 62 participants out of a potential 475 nurses was low at 13%. Because the survey was anonymous, we had no way of tracking who completed the online survey or why 20 people completed the online informed consent but did not continue with the survey. Data collection took place over 3 weeks, which may have contributed to the low response rate. The participants were predominantly white, which reflects the study setting, but might limit generalizability to different settings. The nurses who chose to complete the survey may not be representative of all nurses in the health system or in the United States. The majority of the participants who completed the survey had received some education about unique families, which could have affected results. A larger longitudinal study to evaluate test-retest reliability and to evaluate stability of the two factors among a larger and more diverse sample of nurses would strengthen applicability of the scale.

Implications

Foronda, et al., (2016). highlighted the importance of nurses' self-awareness of their values and beliefs related to unique families and their exposure to education that facilitates confident, sensitive nursing care. Therefore, clinical nurse educators could use the NCSUFT to identify topics for professional growth, to guide discussions that facilitate nurses' awareness of their values and beliefs related to unique families, to assess needs for education and skill-building during orientation of new staff, and as a pretest/post-test to evaluate educational programs that address nursing care of unique families. Part B could be adapted to include the populations most often encountered in a specific health care system.

Conclusions

Nurses provide care to increasingly unique, complex nontraditional families in perinatal/neonatal settings. Through systematic development and initial psychometric evaluation, our study contributes a new measure of perinatal/neonatal nurses' confidence in providing sensitive, specific care to populations of complex/nontraditional families. Confident nurses who are aware of their own assumptions and are sensitive to the needs of unique families can use their skills and resources to create welcoming and safe environments for all families. Hospital perinatal/neonatal managers and educators may find the Nurse Confidence Scale: Unique Families useful to identify areas for professional growth and staff education to improve the nursing care provided for unique families.

References

- American Nursing Association. (2015). *Code of ethics for nurses with interpretive statements* (2nd. ed.). Silver Spring, MD: American Nurses Association.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122–147.
- Bandura, A. (2006). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (Vol. 5, pp. 307-337). Greenwich, CT: Information Age Publishing.
- Barrera, C. M., Nelson, J. M., Boundy, E. O., & Perrine, C. G. (2018). Trends in rooming-in practices among hospitals in the United States, 2007-2015. *Birth*, 45, 432-439. doi: 10.1111/birt.12359
- Blake, L., Carone, N., Raffanello, E., Slutsky, J., Ehrhardt, A. A., & Golombok, S. (2017). Gay fathers' motivations for and feelings about surrogacy as a path to parenthood. *Human Reproduction*, 32, 860-867. doi:10.1093/humrep/dex026
- Dahl, B., Fylkesnes, A. M., Sørli, V., & Malterud, K. (2013). Lesbian women's experiences with healthcare providers in the birthing context: A meta-ethnography. *Midwifery*, 29, 674-681. doi:10.1016/j.midw.2012.06.008
- Ferszt, G. G. & Clarke, J. G. (2012). Health care of pregnant women in U.S. state prisons. *Journal of Health Care for the Poor and Underserved*, 23, 557-569. doi:10.1353/hpu.2012.0048
- Foli, K. J. (2012). Nursing care of the adoption triad. *Perspectives in Psychiatric Care*, 48, 208-217. doi:10.1111/j.1744-6163.2012.00327.x
- Foronda, C., Baptiste, D-L., Reinholdt, M. M., & Ousman, K. (2016). Cultural humility: A conceptual analysis. *Journal of Transcultural Nursing*, 27, 210-217. doi:10.1177/104659615592677
- Fritz, S., & Whiteacre, K. (2016). Prison nurseries: Experiences of incarcerated women during pregnancy. *Journal of Offender Rehabilitation*, 55, 1-20. doi: 10.1080/10509674.2015.1107001
- Gorsuch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Erlbaum.

- Goshin, L. S., Sissoko, D. R. G., Neumann, G., Sufrin, C., & Byrnes, L. (2019). Perinatal nurses' experiences with and knowledge of the care of incarcerated women during pregnancy and the postpartum period. *JOGNN: Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 48, 27–36. doi.org/10.1016/j.jogn.2018.11.002
- Harris, P. A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N., & Conde, J. G. (2009). Research Electronic Data Capture (REDCap) - A metadata-driven methodology and workflow process for providing translational research informatics support. *Journal of Biomedical Information*, 42, 377-381. doi:10.1016/j.jbi.2008.08.010
- Hinshaw, A. S., & Atwood, J. R. (1982). A patient satisfaction instrument: Precision by replication. *Nursing Research*, 31, 170-175, 191.
- Huang, K., Atlas, R., & Parz, F. (2012). The significance of breastfeeding to incarcerated pregnant women: An exploratory study. *Birth: Issues in Perinatal Care*, 39, 145-155. doi:10.1111/j.1523-536X.2012.00528.x
- Hui, K., Angelotta, C., & Fisher, C. E. (2017). Criminalizing substance use in pregnancy: Misplaced priorities. *Addiction*, 112, 1123-1125. doi:10.1111/add.13776
- Kerns, R. D., Turk, D. C., & Rudy, T. E. (1985). *The West Haven-Yale Multidimensional Pain Inventory*. *Pain*, 23, 345-356.
- Kingsbury, D. M., & Chatfield, S. L. (2019). A qualitative metasynthesis of published research exploring the pregnancy and resettlement experience among refugee women. *The Qualitative Report* 2019, 24(2), 242-257. Retrieved from <https://nsuworks.nova.edu/tqr/vol24/iss2/3>
- Kotlar, B., Kornrich, R., Deneen, M., Kenner, C., Theis, L., von Esenwein, S., & Webb, G. A. (2015). Meeting incarcerated women's needs for pregnancy-related and postpartum services: Challenges and opportunities. *Perspectives on Sexual & Reproductive Health*, 47, 221–225. doi: 10.1363/47e3315
- Kramlich, D., Kronk, R., Marcellus, L., Colbert, A., & Jakub, K. (2018). Rural postpartum women with substance use disorders. *Qualitative Health Research*, 28, 1149-1461. doi:10.1177/10497323187657
- Krans, E. E., Bobby, S., England, M., Gedekoh, R. H., Chang, J. C., ...English, D. H. (2018). The pregnancy recovery center: A women-centered treatment program for pregnant and postpartum women with opioid use disorder. *Addictive Behaviors*, 86, 124-129. /doi.org:10.1016/j.addbeh.2018.05.016
- Marshall, H., & Sprung, S. (2016). Community nurse's knowledge, confidence and experience of the Mental Capacity Act in practice. *British Journal of Community Nursing*, 21(12), 615-622. doi:10.12968/bjcn.2016.21.12.615
- McMaster, H. S., LeardMann, C. A., Speigle, S., & Dillman, D. A. (2017). An experimental comparison of web-push vs. paper-only survey procedures for conducting an in-depth health survey of military spouses. *BMC Medical Research Methodology*, 17(73). Retrieved from <https://doi.org/10.1186/s12874-017-0337-1>
- Minor, B. (2017). The PROMIS Short Form v1.0 - General Self-Efficacy 4a. Patient Reported Outcomes Measurement Information System (PROMIS®) Health Organization and Assessment CenterSM National Institutes of Health (NIH). Retrieved from <https://redcap.vanderbilt.edu/consortium/library/search.php>.
- Nisly, N. L., Imborek, K. L., Miller, M. L., Dole, N., Priest, J. B., Sandler, L., . . . Hightower, M. (2018). Developing an inclusive and welcoming LGBTQ clinic. *Clinical Obstetrics and Gynecology*, 61(4), 646-662. doi: 10.1097/GRF.0000000000000405
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed). New York: McGraw-Hill.
- Paynter, M. J., & Snelgrove-Clarke, E. (2017). Breastfeeding support for criminalized women in Canada. *Journal of Human Lactation*, 33, 672-676. doi: 10.1177/0890334417726057
- Rafiei, H., Senmar, M., Mostafaie, M. R., Goli, Z., Avanaki, S. N., Abassi, L., & Mafi, M. H. (2018). Self-confidence and attitude of acute care nurses to the presence of family members during resuscitation. *British Journal of Nursing*, 27, 1246-1249. doi: 10.12968/bjon.2018.27.21.1246
- Rousseau, C., Oulhote, Y., Ruiz-Casares, M., Cleveland, J., & Greenaway, C. (2017, February). Encouraging understanding or increasing prejudices: A cross-sectional survey of institutional influence on health personnel attitudes about refugee claimants' access to health care. *PloS One*, 12(2). Retrieved from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0170910>
- Rubio, D. M., Berg-Weger, M., Tebb, S. S., Lee, E. S., & Rauch, S. (2003). Objectifying content validity: Conducting a content validity study in social work research. *Social Work Research*, 27, 94-104. doi: 10.1093/swr/27.2.94
- Ruud, M. (2018). Cultural humility in the care of individuals who are lesbian, gay, bisexual, transgender or queer. *Nursing for Women's Health*, 22(3), 255-263. doi: 10.1016/j.nwh.2018.03.009
- Schwarzer, R. (2014, May). *Everything you wanted to know about the General Self-Efficacy Scale but were afraid to ask*. Retrieved from http://userpage.fu-berlin.de/health/faq_gse.pdf

- Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. (5th ed.). Boston: Pearson Education, Inc.
- USA for United Nations High Commissioner for Refugees ([UNHCR], 2019). *Refugee statistics*. Retrieved from <https://www.unrefugees.org/refugee-facts/statistics/>
- van Zyl, L., & Walker, R. (2018). Surrogacy, compensation, and legal parentage: Against the adoption model. *Journal of Bioethical Inquiry*, *12*, 383–387. doi:10.1007/s11673-015-9646-4
- Weber, D. (2018). The Unique Families Program and maximizing neutral compassionate care. A plenary presented at the 2018 Breastfeeding and Feminism International Conference. Chapel Hill, NC.
- Whatley, M. A., Cave, S. J., & Breneiser, J. E. (2016). The development of a scale to assess attitudes toward homosexual adoption: A preliminary investigation. *North American Journal of Psychology*, *18*, 107-121. doi:10.1037/t49293-000
- Wolfe-Roubatis, E., & Spatz, D. L. (2015). Transgender men and lactation: What nurses need to know. *MCN: The American Journal of Maternal/Child Nursing*, *40*(1), 32-38. doi:10.1097/NMC.0000000000000097

Table 1

Source of Scale Items

Scale Item	Neutral Compassionate Care	Literature	Hospital Policy
Promote the ability of families to have control over decision-making with their hospital care.	x		x
Manage the newborn's transition process from birth patient to the infant's care provider if appropriate (e.g. prospective adoptive parents, intended parents, or infant guardian).	x		x
Provide emotional support for all unique family members under our care.	x		
Identify the sources of grief experienced by all members of unique families (i.e. birth patients, their partners, prospective adoptive, parents, infant's intended guardian).	x	x	
Use resources effectively to meet care demands of unique families.	x		x
Use appropriate language and definitions when caring for members of unique families.	x	x	x
Identify the guidelines for providing care to unique families.	x		x
Locate the guidelines for providing care to unique families on my nursing unit.	x		x
Facilitate the rooming-in process for the members of unique families who will care for the infant after discharge.	x		x
Involve infant's intended care provider in the infant's discharge planning (i.e. birth patient and partner, prospective adoptive parents, intended parents or infant guardian).	x		x
Identify the role of community agencies (including security guards) and attorneys in decisions related to care of unique families.	x	x	x
Provide educational support to all unique family members.	x	x	x

Intervene to minimize the stress experienced by all members of unique families.	X	X	
Manage the presence of extended family members or security guards on the unit.	X		X
Address the concerns of these extended family members.	X		
Deliver care that addresses the cultural differences of families.	X	X	
Define neutral compassionate care if asked.	X		
Identify and manage my internal conflict when caring for families whose lifestyle choices differ from my own.	X	X	X
Understand how my own experiences may influence my capacity and willingness to engage with these families.	X	X	X
Collaborate effectively with the interprofessional team providing care to unique families.	X	X	X
Provide evidence-based information about infant feeding to all unique families (e.g. breast/chest feeding; human milk expression; formula feeding).	X	X	X

Table 2

Sample Characteristics (N=XX)

Characteristic	n (%)
Age	
21-29	14 (23%)
30-39	24 (39%)
40-49	11 (18%)
50+	13 (20%)
Education	
Associate	14 (23%)
Bachelor's/Masters in Nursing	48 (77%)
Years in health system	
Less than 1	2 (3%)
1-5	19 (31%)
5-10	16 (26%)
More than 10	25 (40%)
Years as an RN	
Less than 5	11(18%)
5-14	26 (42%)
15-29	16 (26%)
30 or more	9 (14%)
I have received education in the UF model	
Yes	47 (76%)
No	15 (24%)
Where did you receive this education?	
4-hour class offered in 2016	18 (35%)
My preceptor	5 (10%)
Reading the UF guidelines on my unit	15 (29%)
Other	13 (26%)
All necessary UF resources are available to me.	
Yes	54 (88%)
No	7 (11%)
Missing	1 (1%)

Table 3

Nurse Confidence Scale: Unique Families Part A Item Statistics

Item	<i>M</i> (SD)	Item-Total Correlation
1. I can promote the ability of families to have control over decision-making with their hospital care.	4.38(.75)	.63
2. I can provide social support (e.g. information, emotional, practical, affirmation) for all unique families under our care.	4.09(.88)	.69
3. I can use accurate language and definitions when caring for members of unique families.	3.83(.96)	.76
4. I can identify, locate, and use our health system's policies, processes, and protocols related to care of unique families.	3.43(1.2)	.60
5. I can facilitate the rooming-in process for the members of unique families who will care for the infant after discharge.	4.26(.99)	.79
6. I can provide evidence-based information about infant feeding to all unique families (e.g. breast/chest feeding; human milk expression; formula feeding)	3.93(1.0)	.60
7. I can provide support to extended family members who are present on the unit.	4.24(.76)	.66
8. I can deliver care that addresses the cultural differences of families.	3.98(.96)	.72
9. I can define neutral compassionate care if asked.	4.07(.90)	.64
10. I can identify and manage my internal conflict when caring for families whose lifestyle choices differ from my own.	4.57(.65)	.58
11. I can understand how my own experiences may influence my capacity and willingness to engage with these families.	4.48(.66)	.58
12. I can collaborate effectively with members of the interprofessional team and community partners providing care to unique families (e. g. social workers, CPS, correctional facility personnel, attorneys, adoption agencies, interpreters, substance use disorder counselors, physicians).	4.14(.65)	.67

Table 4

Principal Component Analysis with Direct Oblimin Rotation of the Nurse Confidence Scale: Unique Families

Item	Factor Loadings	
	1	2
1. I can promote the ability of families to have control over decision-making with their hospital care.	.11	.73
2. I can provide social support (e.g. information, emotional, practical, affirmation) for all unique families under our care.	.31	.56
3. I can use accurate language and definitions when caring for members of unique families.	.89	.03
4. I can identify, locate, and use our health system's policies, processes, and protocols related to care of unique families.	.69	.04
5. I can facilitate the rooming-in process for the members of unique families who will care for the infant after discharge.	.57	.38
6. I can provide support to extended family members who are present on the unit.	.27	.59
7. I can deliver care that addresses the cultural differences of families.	.85	-.02
8. I can define neutral compassionate care if asked.	.79	-.05
9. I can identify and manage my internal conflict when caring for families whose lifestyle choices differ from my own.	-.13	.93
10. I can understand how my own experiences may influence my capacity and willingness to engage with these families.	-.14	.95
11. I can collaborate effectively with members of the interprofessional team and community partners providing care to unique families (e.g. social workers, CPS, correctional facility personnel, attorneys, adoption agencies, interpreters, substance use disorder counselors, physicians).	.69	.09
12. I can provide evidence-based information about infant feeding to all unique families (e.g. breast/chest feeding; human milk expression; formula feeding).	.75	-.08

Note. Bold text indicates factor loading

Table 5

Nurse Confidence Scale: Unique Families: Part B Item Statistics

Item	<i>M</i> (SD)	Item-Total Correlation
Surrogacy	4.01(1.02)	.73
Adoption	3.98(1.07)	.81
Incarceration	3.80(1.08)	.75
Substance Use Disorder	4.05(.78)	.67
LGBTQ	4.25(.79)	.67
Refugee	3.77(.96)	.72
Culture different from my own	4.02(.81)	.62