EXAMINING FACILITATORS FOR MEN DURING NURSING EDUCATION: DEVELOPMENT AND PSYCHOMETRIC TESTING OF THE SURVEY OF FACILITATORS FOR MEN (SFM)

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DEDICATION

This work is gratefully dedicated to the excellent men in nursing who shared their insights and experiences with me in conversations, as content experts, and through responses to the survey. It has been my pleasure to learn from you, to serve with you in the United States Air Force, to work beside you in civilian employments, and to help mentor and educate you as students. The strengths and skills you bring to the profession of nursing are extremely valuable and badly needed. Hang in there!

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Eternal thanks are due to my Lord and Savior, Jesus Christ, for the gift of life and the desire to serve. May this work be an inspiration and blessing for others.

Dorothy G. Clark-Ott

EXAMINING FACILITATORS FOR MEN DURING NURSING EDUCATION: DEVELOPMENT AND PSYCHOMETRIC TESTING OF THE SURVEY OF FACILITATORS FOR MEN (SFM)

Despite outstanding employment opportunities and high demand to address the global nursing shortage, men who consider becoming nurses are less likely to enroll in and to graduate from nursing programs. Many barriers that men commonly encounter during nursing education have been found in the literature; however, there is a lack of theoretically based research that examines factors that help men succeed as they study nursing. Based on a conceptual model derived from O'Lynn's construct of male friendliness in nursing education and Frankl's theory of will to meaning and purpose in life, this study examined facilitators for men during nursing education. This was accomplished through the development and psychometric testing of the Survey of Facilitators for Men (SFM) in a sample of 145 men in nursing. Strong evidence of reliability and validity was provided for the SFM consisting of three subscales (Internal facilitators, External Connections facilitators, and Institutional facilitators). Internal facilitators consist of intrapersonal strengths, experiences, and motivators. External Connections facilitators are interpersonal connections that emerge from relationships that men develop. Institutional facilitators involve structural or organizational aspects of institutions that ease barriers. Testing provided satisfactory evidence of internal consistency ($\alpha = .85$) and test-retest reliability (intraclass coefficient = .72; confidence interval = 0.57–0.83). Dimensionality of three facilitator subscales was supported by Principle Axis Factoring with Varimax rotation and satisfactory factor loadings (.49–.72). Support for the conceptual model was provided using multiple regressions explaining

17% of the variance in purpose in life [$F(4, 140) = 6.99$, $p < .001$], 13% of the variance in GPA [$F(6, 114) = 2.88$, $p < .01$], and 49% of the variance in perception of nursing success [$F(9, 128) = 13.42$, $p < .001$]. Purpose in life was associated with Internal facilitators and comfortable income, GPA was associated with External Connections facilitators and age at BSN, while perception of nursing success was associated with purpose in life, holding an MSN, having a comfortable income, and having children. Future research is warranted to determine the usefulness of the SFM in designing strategies to recruit and retain men in nursing programs.

Tamilyn Bakas, PhD, RN, Chair

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List of Abbreviations

AAMN	American Assembly for Men in Nursing
BSN	Bachelor of Science in Nursing
DNP	Doctorate of Nursing Practice
GPA	Grade Point Average
IMFNP	Inventory of Male Friendliness in Nursing Programs
IRB	Institutional Review Board
MSN	Master's of Science in Nursing
NCLEX	National Council Licensure Examination
PIL	Purpose in Life
RN	Registered Nurse
SFM	Survey of Facilitators for Men

CHAPTER 1. THE NATURE OF THE STUDY

Thousands of men and women of varied ages and backgrounds apply to American nursing programs every year. In 2011, nursing schools in the United States turned away 58,327 qualified applicants from baccalaureate programs citing insufficient numbers of faculty, clinical sites, classroom space, clinical preceptors, and budget constraints (American Association of Colleges of Nursing, 2012). Of the over 80,000 applicants who were accepted to nursing programs, Gardner, Deloney, and Grando (2007) estimated that up to 50% of accepted applicants may not successfully complete the nursing program. The fact that men and minorities have a disproportionately higher rate of attrition (Bouden, 2008) is of grave concern, especially in view of a looming nursing shortage that is expected to exceed 260,000 nurses by 2025 (Buerhaus, Auerbach, & Staiger, 2009). While more than 11% of baccalaureate nursing students in the 2010–2011 school year were men (American Association of Colleges of Nursing, 2012), the overall number of men in nursing was slightly over 7% (National Academy of Sciences, 2011).

Most nursing students, both men and women, choose nursing as a profession because they want to make a difference and help others (Okrainec, 1994). What students actually experienced in nursing programs was described as “tiring, stressful, busy and intellectually difficult” (Ellis, Meeker, & Hyde, 2006, p. 524). Contributing to the attrition may be students’ perceptions of work overload and loss of time for relaxation, compounded by a sense of isolation and lack of support, resulting in detrimental effects on their physical and mental health. As an example, 34% of the 84 first-year nursing students who completed a depression survey in 2005 had scores that indicated they were at risk for depression (Dzurec, Allchin, & Engler, 2007).

In the United States, male enrollment in schools of nursing has been increasing at a lethargic pace. While men made up 8% of nursing students in 1991, the number has

only increased to 11.4% in 2011 (American Association of Colleges of Nursing, 2012). One potential reason for the slow growth may be a lack of information regarding barriers and facilitators for men as they enroll in schools of nursing and are educated primarily by women. It is possible that this rate of growth in male student enrollment could be improved dramatically if barriers and facilitators were better recognized and addressed vigorously at all levels.

The concept of barriers for male nursing students has been studied to some extent. Barriers for men in nursing programs initially were explored in 2004 by O'Lynn through the use of the Inventory of Male Friendliness in Nursing Programs (IMFNP) tool. Barriers identified by O'Lynn (2004) included lack of role models, isolation, little instruction on male styles of caring, and infrequent use of teaching strategies favored by men. Bell-Scriber (2008), Stott (2007), and Villeneuve (1994) confirmed the male perception of isolation in academic and clinical settings. Both interpersonal communication (Anthony, 2006; Coates, 2004; Ellis et al., 2006; Milligan, 2001; O'Lynn, 2004; Stott, 2007; Tannen, 1990) and the use of humor in conversation have been noted to be problematic (Dyck, Oliffe, Phinney, & Garrett, 2009; Milligan, 2001). Female recognition of male caring behaviors was found to be poor (Fisher, 2009; Grady, Stewardson, & Hall, 2008; O'Lynn, 2004; O'Lynn & Krautscheid, 2011; Streubert, 1994; Tannen, 1990).

The feminization of the nursing profession presented significant challenges for men as a highly visible minority (Anthony, 2006; Bell-Scriber, 2008; Keogh & O'Lynn, 2007; Kleinman, 2004; LaRocco, 2006; Meadus & Twomey, 2007; O'Lynn, 2004; Roth & Coleman, 2008). Young men felt obligated to justify their choice of profession to peers and family members who were less than supportive (Brady & Sherrod, 2003; Kleinman, 2004; Meadus & Twomey, 2007; Roth & Coleman, 2008; Villeneuve, 1994; Whittock & Leonard, 2003).

The ability to handle stress had a potentially significant impact on men during nursing education. Program success could be dependent on how well students were able to handle academically stressful events (Hegge, 2008). When Ellis and co-researchers (2006) considered what men classified as positive and negative about nursing school, negatives included the amount of work and time required to survive nursing school, the lack of male faculty, and little positive feedback from instructors. The "pressure of nursing school" was cited as a common stressor (Ellis et al., 2006, p. 525). Positives included "a sense of accomplishment, and receiving praise from patients" (Ellis et al., 2006, p. 526).

Articles discussing barriers for men in nursing often included suggestions about recruiting or retention, but few articles were located that listed specific facilitators and none attempted to quantify their findings. Bartfay (2007) reviewed 12 surveys from Canadian male nursing students who were asked how to encourage more male applications. Students suggested recruitment targeted to men, focusing on employment opportunities, the need for financial incentives and more male role models, more challenging scientific and less psychosocial coursework, and changing the term "nursing" to something less feminine such as health practitioner.

Given the paucity of literature regarding facilitators for male nursing students, valuable insights were gained through consideration of purpose in life as a possible facilitating factor. The importance of having a purpose in life was first championed by Dr. Viktor Frankl, an Austrian psychiatrist. Dr. Frankl found that inmates of Nazi concentration camps (including himself) "who were oriented toward the future, whether it was a task to complete in the future, or a beloved person to be reunited with, were most likely to survive the horrors of the camps" (1955, pp. x). Frankl himself partially credits his survival to his intense motivation to reconstruct his first book; he watched the destruction of the original manuscript that occurred at the time of his arrest. According to

Zika and Chamberlain, purpose or “meaning in life focuses on purposeful existence and striving for goals” (1992, p. 143), which has been considered as a reliable and strong predictor of psychological well-being (Zika & Chamberlain, 1987). Higher purpose in life also has been associated with less anxiety and greater self-confidence (Yarnell, 1971), self-acceptance (Crumbaugh & Maholick, 1964), and “positive characteristics, strong values, and healthy mental attitudes” (Molasso, 2006, p. 2).

Additional insights regarding potential facilitators were gained through the examination of research studies that focused on assisting culturally diverse nursing students of both genders.

Jeffreys (2007) surveyed 1,156 non-traditional nursing students, 16% (*n* = 184) of whom were male. Using factor analysis, she identified five important supportive factors. The largest factor was environmental, which consisted of items such as living arrangements, family responsibilities, finances, family financial support, financial aid, and family emotional support. When combined, the other four factors (institutional, personal, college-related, and friends) just barely exceeded the environmental supports factor value. Diverse student needs were examined in a small sample (*n* = 17; 14 female/3 male) by Amaro, Abriam-Yago, and Yoder (2006); minority students identified personal, academic, language, and cultural needs. Williams (2010) interviewed 10 diverse students of unspecified gender regarding nursing program persistence. The qualitative study equated persistence with the themes of “Keeping Up, Not Giving Up, Just Doing It, and Connecting to Resources” (p. 362). Utilizing literature on facilitators for diverse nursing students was challenging because researchers have identified many similar student needs, but labeled or grouped them differently, making comparisons difficult.

A thorough search of the literature revealed no instruments that attempted to identify or quantify facilitators for men during nursing education. Therefore, the Survey of Facilitators for Men (SFM) during nursing education was developed (Appendix A); items

related to potential domains of facilitators comprised the instrument; purpose in life and demographic characteristics were incorporated as potential facilitators as well. Initially, there was limited overlap with a few of O'Lynn's IMFNP (2007) barrier items. Specifically, the need for male mentors and preceptors, the lack of instruction related to history of men in nursing, gendered differences in communications and caring behaviors, and the need for supportive friends were reworded to become facilitators in the SFM. The purpose of this study was to describe the psychometric properties of a new measure that may prove useful in examining facilitators for men during nursing education. Facilitators were grouped into demographic characteristics, Internal facilitators, External Connections facilitators, Institutional facilitators, and Purpose in Life (PIL).

Problem Statement

The concept of barriers for male nursing students has been studied to some extent, while facilitators for male nursing success have been examined incidentally in nursing and social science literature. Most of the limited research in this area focused on specific variables such as ethnicity or student age, although the literature related to assisting multicultural nursing students provided a loose frame of reference. No articles were located that conceptually analyzed either barriers or facilitators in nursing education for men. The scarcity of research in this area was noted in the literature: Smith (2006) stated that "research on the factors associated with retaining male nursing students is lacking" (p. 263), while O'Lynn (2004) wrote that the relationship of "barriers to male student academic success, retention and satisfaction…are relatively unexplored" (p. 230).

The presence of barriers for men in nursing education has been documented, while the explication of facilitators has not yet occurred. Although the number of men in nursing has been increasing, the pace has been sluggish. The need for many more men in nursing in order to provide gender-sensitive and culturally-sensitive care, and the

global shortage of nurses has made the need to address this issue even more urgent. The SFM was developed to address this need; selected items previously were tested for face validity in a preliminary sample of male nursing students and registered nurses (RNs; *N* = 68). The SFM instrument received input from content experts, and evaluation of reliability and validity through psychometric testing was conducted in order to determine SFM usefulness in identifying and quantifying facilitators for men in nursing education.

Purpose

The purposes of this study were (a) to determine the psychometric properties of the survey, after analyzing and incorporating comments previously provided by respondents to the earlier version of the survey, and after undergoing review by content experts with revision as indicated; (b) to identify variables associated with facilitators for men during nursing education; and (c) to clarify the relationship that purpose in life played for men in nursing education.

Specific Aims and Hypotheses

Specific Aim 1. Analyses of qualitative comments from respondents to the preliminary survey; incorporation of comments as indicated into the SFM during nursing education.

Hypothesis 1a. Qualitative comments from respondents to the preliminary survey (*N* = 68) are utilized as a predetermined code list for analysis, according to guidelines provided by Miles and Huberman (1984). Code list items are grouped under the associated existing survey items. Any code list items found that were not already addressed by existing survey items are evaluated for inclusion in the SFM. Therefore, the SFM contains items related to all major points addressed by respondents to the preliminary survey.

Specific Aim 2. Evaluation of the psychometric properties of the SFM.

Hypothesis 2a. Determine the degree of relevance of individual survey items and the entire scale through review by a panel of six content experts to establish support for content validity. All content experts (five males and one female) have researched and/or published in the area of men in nursing. They include the author of the IMFNP survey and multiple articles and books (O'Lynn), an education dean who researched non-traditional men in nursing (Smith), two internationally recognized authors and trailblazers for men in nursing (Pesut and Tranbarger), one nurse educator who served as an American Assembly of Men in Nursing (AAMN) officer (Lee), and one well published Canadian nurse educator (Twomey). According to Lynn's (1986) criteria, having six content experts permitted some room for disagreement, while still allowing for support of content validity for each item and the entire instrument.

Hypothesis 2b. SFM items demonstrate means close to the center of the range for possible scores, indication of good variability, floor and ceiling effects less than 10% (DeVellis, 2003), and item-to-total correlations greater than or equal to .30 among men in nursing (Ferketich, 1991).

Hypothesis 2c. The survey and domains have evidence of internal consistency reliability with Cronbach alphas greater than or equal to .70 among men in nursing (DeVellis, 2003).

Hypothesis 2d. The survey and domains have evidence of two-week test-retest reliability with an intra-class correlation coefficient greater than .60 among men in nursing (Shrout & Fleiss, 1979).

Hypothesis 2e. The SFM provides evidence of support for construct validity with factor loadings of .32 and above for the scale or each domain as determined through factor analysis among men in nursing (Tabachnick & Fidell, 2007).

Hypothesis 2f. The SFM provides evidence of support for criterion-related validity with significant correlations between the SFM and domains, and the PIL instrument among men during nursing education.

Specific Aim 3. Determine the combination of independent variables that explains a significant amount of variance in (a) purpose in life, (b) grade point average (GPA), (c) National Council Licensure Examination (NCLEX) for RNs attempts, and (d) perceived nursing success in men in nursing using a theoretically based conceptual model to provide further evidence of support for construct validity for the SFM.

Hypothesis 3a. Characteristics of male nursing students, Internal facilitators, External Connections facilitators, and Institutional facilitators explain a significant amount of variance in purpose in life for men in nursing.

Hypothesis 3b. Characteristics of male nursing students, Internal facilitators, External Connections facilitators, Institutional facilitators, and PIL explain a significant amount of variance in male nursing students' GPA upon baccalaureate graduation.

Hypothesis 3c. Characteristics of male nursing students, Internal facilitators, External Connections facilitators, Institutional facilitators, and PIL explain a significant amount of variance in male nursing students' number of NCLEX attempts prior to successful passage.

Hypothesis 3d. Characteristics of male nursing students, Internal facilitators, External Connections facilitators, Institutional facilitators, and PIL explain a significant amount of variance in the perception of nursing success for men in nursing.

Conceptual and Operational Definitions

Respondent Demographic Characteristics

Conceptual definition. Respondent characteristics and extraneous variables "exist in all studies and can affect the measurement of study variables and the relationships among these variables" (Burns & Grove, 2011, p. 177). The demographic

characteristics of men in nursing education were collected to provide a detailed description of the sample and to determine characteristics that may be associated with other study variables. Characteristics of the men in nursing include (a) demographic information such as current age and age at baccalaureate graduation, race, ethnicity, marital status, children, birth order, and length of any prior military service; and (b) means of personal and family financial support during education.

Operational definition. A demographic form developed by the researcher measured respondent characteristics as previously described.

Internal Facilitator Variables

Conceptual definition. Internal facilitators were the *intrapersonal* strengths, experiences, and motivators that men brought to the pursuit of their nursing careers. These student qualities have been associated in quantitative and qualitative literature with increased nursing student success for men. They included items such as the student's vision or goal of himself as a practicing nurse, the student's personal certainty in the career choice he made, or the student's belief that his life as a nurse would be exciting and interesting.

Operational definition. Internal facilitator variables were measured by the Internal facilitators domain of the SFM during nursing education instrument that was psychometrically tested during this research. The SFM measured the frequency with which men experienced individual facilitators during nursing education using three subscales of facilitators (Internal, External Connections, and Institutional). A five-point Likert-type response scale was used to respond to the prompt "I experienced this"; responses range from 1 (*did not experience this*) to 5 (*a great amount*). Five SFM items measured Internal facilitators.

External Connections Facilitator Variables

Conceptual definition. External Connections facilitators were defined as the *interpersonal* connections that emerged from the relationships men developed or cultivated with others inside of the nursing program who were valued or influential. Pesut referred to the “We” space and noted that “what you know about the We often derives from resonance and mutual understanding, empathy, collective reflection, storytelling, and dialogue/debate” (2013, p. 188). External Connections facilitators included the availability of faculty to meet with students, faculty modeling caring behavior towards students, and having instructors who were “OK with men.”

Operational definition. External Connections facilitator variables were measured by the External Connections facilitators domain of the SFM. Four SFM items measured External Connections facilitators.

Institutional Facilitator Variables

Conceptual definition. Institutional facilitators were defined as structural or organizational aspects of nursing programs or institutions that were designed to ease constraints in nursing student activities or to eliminate barriers identified by male nursing students. These facilitators included instruction regarding gender differences in communication and caring behaviors, and schools of nursing marketing to and recruiting men.

Operational definition. Institutional facilitator variables were measured by the Institutional facilitators domain of the SFM. Four SFM items measured Institutional facilitators.

Purpose in Life

Conceptual definition. PIL was defined conceptually by Crumbaugh and Maholick as the “significance of life from the point of view of the experiencing individual” (1964, p. 201). The concept of purpose in life was first proposed by Viktor Frankl as the

will to meaning and the essence of human motivation; Frankl developed logotherapy as a means to treat the lack of purpose in life or what he termed “existential frustration” (Crumbaugh & Maholick, 1964, p. 200). According to Molasso, the original Crumbaugh PIL survey was developed to measure “the degree to which a person experiences a sense of purpose in life” (2006, p. 16). Schulenberg and Melton (2010) posited that in order for meaning to be perceived, “individuals should be aware of what life aspects are most vital and live their lives consistently with those values” (p. 95). Morgan and Farsides (2009) utilized a sample of adults, both community members and college students, to perform factor analysis on the PIL. They identified two major factors accounting for 49% of the total variance in purpose in life: exciting life and purposeful life.

Operational definition. Crumbaugh and Maholick defined purpose in life as “that which is measured by our instrument” (1964, p. 201), the PIL test. The PIL was developed as a general tool to assess meaning; it has been studied with different populations including college students, military veterans, hospitalized patients undergoing psychiatric treatment, and alcoholics. Although it was developed with a quantitative as well as a qualitative component, the quantitative portion has been most commonly used for research purposes because it was relatively simple to compare across populations. In this study, the term PIL referred to the quantitative, 20-item component of Crumbaugh and Maholick’s (1964) original tool.

In the open-sourced PIL tool, each of the 20-item statements had a stem and a semantic differential scale with possible responses ranging from one extreme to the opposite. Respondents rated each statement on a scale of 1 to 5, according to the number that corresponded to what was most true for them at the time that they answered. Scores ranged from 20 to 100; higher scores were consistent with greater perceptions of meaning and purpose in life. Examples of questions were level of

enthusiasm versus boredom, presence versus absence of goals and aims, and daily tasks being a painful and boring experience or a source of pleasure and satisfaction (Crumbaugh & Maholick, 1964).

Nursing Success

Conceptual definition. While nursing literature had much to say about student retention in nursing programs, it was less likely to define success. Nursing success could be equated simply with program completion, or the "payoff being graduation," according to one of Smith's (2006, p. 266) respondents. Jeffreys (2007) made the point that the recruiting of students does not guarantee successful program completion, licensure as a RN, or accepting professional employment, all of which could be considered as indicators of nursing success. Williams (2010) preferred the term *persistence*, which her respondents used to describe practices that "helped students belong, persist and flourish" (p. 364) during nursing education. In this research, nursing success was defined more broadly as both academic success and "the personal, psychological and spiritual integration" (Pesut, 2013) that is just as important for men in nursing as academic endeavors and professional practice.

Operational definition. Nursing success was evaluated using three criteria: (1) GPA at baccalaureate graduation, (2) the number of NCLEX-RN attempts needed for successful passage, and (3) the respondent's current perception of his own overall nursing success. The data were collected on the demographic form accompanying the survey; GPAs could have ranged from 2.0 to 4.0; NCLEX attempts could have ranged from one to three, since the number of NCLEX attempts permitted varied by state. For overall nursing success, respondents answered the following: On a scale of 0 (*not at all*

successful) to 10 (*extremely successful*), how successful overall do you think you are in your current nursing career? Nursing success responses could have ranged from 0 to 10.

Conceptual Model

The conceptual model guiding this study was derived from the work of O'Lynn (2004), who first quantified barriers for men in nursing. Numerous studies of the experiences of men during nursing education and as RNs provided limited data on both helpful and harmful practices. While O'Lynn did ground-breaking work in quantifying barriers, no quantifiable research had been done on facilitators for men in nursing education. A thorough literature review resulted in the development of the SFM instrument, based on facilitators for men in nursing education. The conceptual model, as illustrated in Figure 1, portrayed the hypothesized relationships among the independent variables of respondent characteristics: Internal facilitators, External Connections facilitators, Institutional facilitators, and PIL. The conceptual model also portrayed the dependent variable of Nursing Success, measured by GPA at graduation, NCLEX attempts, and respondent perception of overall nursing success.

The relationships among respondent characteristics and Internal, External Connections, and Institutional facilitators were supported in the literature. The addition of the "purpose in life" construct originally was suggested through multiple conversations the researcher had with male students during advising appointments. First proposed by Viktor Frankl as the essence of human motivation, purpose in life was the force that helped clarify for people what mattered to them individually and motivated them to strive towards that vision or goal. This researcher noted that male students who articulated a clear purpose for their nursing education were more likely to successfully complete the program than those without a definite goal. A search of the literature revealed that while purpose in life had been studied in hospitalized alcoholics, veterans, and college

students (Crumbaugh & Maholick, 1964; Molasso, 2006; Schulenberg & Melton, 2010) and played a role in college student retention literature (Millard, 2004; Pattengale, 2008), it had not previously been studied in nursing students.

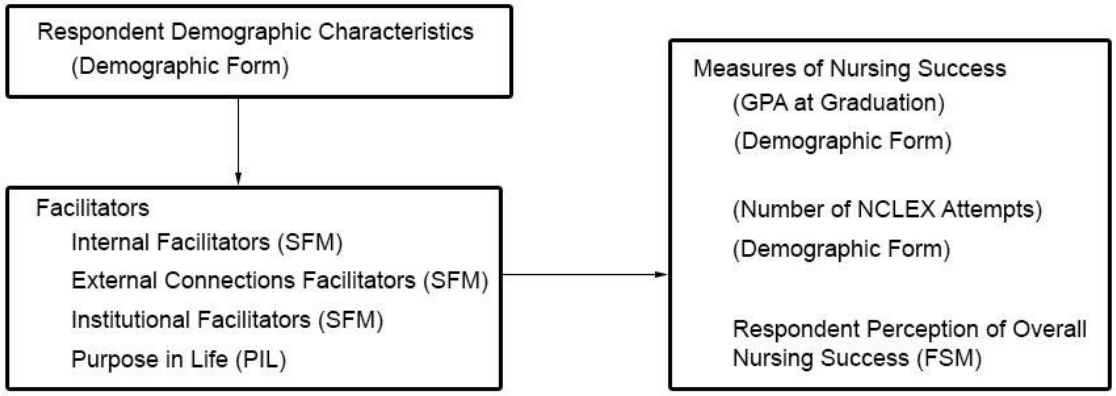

Figure 1. Conceptual model of survey of facilitators for men in nursing education (SFM). Copyright 2014 by Dorothy Clark-Ott.

Assumptions

1. Instruments measured the constructs being studied accurately.
2. Respondents honestly reported their perceptions.
3. Relationships as they were hypothesized were correct representations of male nursing students' experiences during nursing education.
4. Interventions in the areas of Internal facilitators, External Connections facilitators, Institutional facilitators, and PIL were possible and could promote improved educational experiences for male nursing students.

Limitations

1. The study utilized a non-randomized purposive sample, limiting the generalizability of the results.
2. Survey respondents utilized memory in order to complete the survey; memorization may have altered their reported perceptions regarding the importance of facilitators and affect the validity of findings.

3. Facilitators for men during nursing education were measured by a newly developed instrument with no prior psychometric testing.

This study was cross-sectional, but future study could benefit from a longitudinal design so that respondents might be assessed several times during their nursing education programs and professional experiences. Study participation by respondents who failed to complete their nursing programs or those who later returned for successful completion might be informative. Previously, no instrument that provided evidence of support for reliability and validity existed to quantify facilitators for men during nursing education.

CHAPTER 2. REVIEW OF THE LITERATURE

Chapter 1 presented the nature of the research. The chapter included a statement of the problem, the purpose, specific aims and hypotheses, the conceptual and operational definitions, the conceptual model, and the assumptions and limitations of the study. This chapter provides an overview of O'Lynn's construct of male friendliness in nursing programs, an overview of Frankl's theory of the will to meaning and purpose in life, an explanation of the proposed conceptual model derived from O'Lynn's and Frankl's theories, and research findings from the literature relevant to the research.

Overview of O'Lynn's Construct of Male Friendliness in Nursing Programs

The conceptual model for this research was derived from O'Lynn's construct of male friendliness in nursing programs. O'Lynn (2007) defined male friendliness as "a function of the presence and importance of the barriers men confront as they strive to achieve academic success and satisfaction in their nursing education programs" (p. 179). He noted that while many barriers such as time constraints, family and occupational demands, academic challenges and bureaucratic hurdles are encountered by both men and women, men faced specific gender-related barriers in making a decision to study nursing as well as actually doing so.

Overview of Frankl's Theory of Meaning and Purpose in Life

The conceptual model was strengthened with the addition of elements from Viktor Frankl's Theory of Meaning (1955), as quantified by Crumbaugh and Maholick in the PIL instrument (1964). The PIL was included as a component in the research partly in response to literature suggesting that men perceive nursing education as something to "survive" and "get through" (Ellis et al., 2006, p. 525). The reflection of one of Ellis et al.'s (2006) students was reminiscent of Frankl's belief that suffering could be endured for a meaningful delayed reward (1969). The literature regarding men in nursing identified the

presence of a planned career trajectory as one of the more common differences between men and women who chose to study nursing (Ellis et al., 2006; Kleinman, 2004; LaRocco, 2006; Okrainec, 1994; Stott, 2007; Villeneuve, 1994). Consequently, men could be more likely to succeed in nursing education if they had a firm career goal. Although the PIL instrument previously had been utilized with a variety of populations, including hospitalized alcoholics, veterans, and college students (Crumbaugh & Maholick, 1964; Molasso, 2006; Schulenberg & Melton, 2010) and played a role in college student retention literature (Millard, 2004; Pattengale, 2008), it had not previously been studied in nursing students.

Conceptual Model Relevance to Nursing Education

O'Lynn's (2004) construct of male friendliness in nursing programs guided several published and unpublished studies of male nursing students and the barriers they encountered during nursing education. According to O'Lynn (2007),

> barriers are described primarily in the findings of qualitative studies, reviews, and anecdotal reports, and can be roughly categorized as barriers related to (a) the feminine paradigm in nursing education; (b) a lack of role models and isolation; (c) gender-based language; (d) differential treatment; (e) different styles of communication; and (f) issues of touch and caring. (p. 174)

O'Lynn (2007) defined male friendliness as "a function of the perceived presence and importance of barriers men confront as they strive to achieve academic success and satisfaction in their nursing education programs" (p. 179). He hypothesized that an increased perception of barriers would be associated with a lower level of male friendliness in nursing programs, resulting in increased stress and possibly a higher level of male attrition from nursing programs. A 2004 piloted randomized study utilizing O'Lynn's instrument (n = 111) supported the belief that many of these barriers were present in the respondents' nursing programs and that most barriers were reported as important (O'Lynn, 2004).

The conceptual model depicted in Figure 1 that guided this research was derived from consideration of the literature, especially O'Lynn's work on male friendliness in nursing programs, as well as numerous conversations the researcher had with male colleagues and students. While multiple qualitative studies or informational articles suggested remedies for problems men encountered as nurses, no previous instrument attempted to quantify facilitators for men during nursing education.

The model hypothesized that individual student demographic characteristics such as age or previous employment experiences acted as facilitators for men during nursing education. Facilitators were classified further as Internal, External Connections, and Institutional. Internal facilitators were strengths residing in the student himself. External Connections facilitators proceeded from the relationships that men had or developed with people meaningful to them such as faculty. Institutional facilitators were helpful practices that nursing programs or institutions utilized to recruit or support students. These categories of facilitators interacted with each other and also the respondent's demographic characteristics, resulting in nursing success. Nursing success was evaluated here as the student's GPA at baccalaureate graduation, the number of times NCLEX was taken before successful passage, and the respondent's current perception of his own overall nursing success.

An additional facilitator, PIL, was proposed in the conceptual model. Viktor Frankl was the first to examine purpose in life as the force that helped people clarify what mattered to them and motivated them to strive toward those goals. Frankl (1969) theorized that purpose and meaning in life could be developed in several ways: (a) engaging in or creating something valued by the individual, (b) experiencing something or someone in a deep and profound way, or (c) choosing how one responds to the unavoidable sufferings of life. He believed that struggle clarified and strengthened

individual motivation. While purpose in life had been studied in numerous populations, it had not been studied in nursing students.

Review of Literature

Multiple literature searches were conducted in order to assess existing literature related to facilitators for men during nursing education. CINAHL, OvidMedline, PubMed, EBSCOHost, and ProQuest databases were reviewed electronically, utilizing combinations of the following keywords: male nursing students, nursing education, facilitators, success, retention, attrition, academic achievement, mentoring, minority nursing students, and persistence. The search was limited from 1993 to November 2013. Over 218 abstracts were reviewed for relevance to this study. Some abstracts described a sample comprised only of female nursing students; these were considered non-germane. Abstracts that focused exclusively on faculty experiences with minority students that failed to give gender composition of sample also were considered non-useful. Additional relevant articles were collected through examination of references from pertinent, previously selected articles. The findings from additional unpublished work performed by the researcher in 2011 concerning barriers and facilitators for men in nursing were included in this review as well.

The Facilitators for Men during Nursing Education

Although most articles regarding barriers made some recommendations for recruitment or retention strategies, specific facilitators for men in nursing education rarely have been addressed in the nursing research literature. Facilitators have often been considered the tools of leaders, who “align people, practice and purpose” (Pesut, 2007, p. 166) within an organization to attract, support, and promote the success of men during nursing education. Facilitators were defined in this study as qualities that support and promote the success of men during nursing education. Facilitators were hypothesized to be related to demographic characteristics, Internal facilitators, External

Connections facilitators, and Institutional facilitators, some of which were specific remedies for the barriers identified in nursing education programs.

Demographic characteristics were personal aspects of the men, such as age, marital status, children, sexual preference, military experience, and highest degree attained. Internal facilitators were strengths that men themselves brought to their pursuit of nursing; examples of this type of facilitator might have been degree of certainty in choice of profession, or strength of goal to become a RN. External Connections facilitators emerged from the relationships men developed or cultivated with influential others; examples of External Connections facilitators were the satisfying interactions men valued with faculty or with patients, the high regard they had for mentoring, or the sense of empowerment they experienced as they taught patients to provide as much self-care as possible. Institutional facilitators were specific actions, often developed by those responsible for nursing education programs in response to barriers identified by male nursing students. Examples included periodic surveys of marketing, class materials to ensure male representation or recruitment outreach, and the provision of student and faculty instruction regarding male and female methods used for communication, or to exhibit caring behaviors.

Respondent Demographic Characteristics

Men in nursing education have often entered the field with certain characteristics that may improve their likelihood of success. They tended to be older, and have more work experience and higher levels of education (Anthony, 2006; Okrainec, 1994; Roth & Coleman, 2008; Villeneuve, 1994). They have considered practical reasons for becoming a nurse, such as salary, flexibility or job security (Anthony, 2006; Ellis et al., 2006; Kleinman, 2004; LaRocco, 2006; Meadus & Twomey, 2007); they also frequently have had specific career plans and goals that involved high levels of technology and autonomy of practice (Ellis et al., 2006; Kleinman, 2004; LaRocco, 2006; Okrainec,

1994; Stott, 2007; Villeneuve, 1994). Although many men never even considered a nursing career until they were aged 20 years or older (LaRocco, 2006; Okrainec, 1994), they were more inclined to do this after experiencing the care of a nurse either personally or through care of a family member (Ellis et al., 2006; Whittock & Leonard, 2003). Men who entered nursing education often had family members, especially mothers, or friends who were nurses (Anthony, 2006; Brady & Sherrod, 2003; Meadus & Twomey, 2007; Romen & Anson, 2005; Roth & Coleman, 2008; Whittock & Leonard, 2003). Birth order was included as a demographic variable in consideration of the great amount of interest the topic has generated since Alfred Adler's 1928 initial work in the area (Shulman & Mosak, 1977). Although Guastello and Guastello (2002) sampled 535 undergraduate students and found no significant effects for personality traits associated with birth order, Eckstein et al. (2010) reviewed 200 birth order studies and found evidence supporting lifestyle characteristics that were associated with specific birth orders. After consulting Mills and Mooney's (2013) research on methods of ranking birth order, the decision was made to use the method aligning with Adler's theory, i.e., first-born, middle-born, last-born, and only child.

Internal facilitators were the *intrapersonal* strengths, experiences, and motivators that men brought to their pursuit of their nursing careers. These qualities may have been related to the reasons why men were drawn to nursing and why they persisted through nursing education. While both men and women became nurses because they wanted to make a difference in people's lives, men were more likely to appreciate the career opportunities, job security, and flexibility that nursing offered (Anthony, 2006; Ellis et al., 2006; Kleinman, 2004; LaRocco, 2006; Meadus & Twomey, 2007; Okrainec, 1994; Villeneuve, 1994), while women were more attracted to the Internal rewards of helping people or realizing a life-long dream (Romen & Anson, 2005).

Men more often than women have had a specific terminal career goal, such as becoming a certified RN anesthetist (Ellis et al, 2006); this provided them with a long-range view and a specific purpose. They were more likely to have had prior work experience (Anthony, 2006) and that often has not resulted in personal satisfaction or success (Meadus & Twomey, 2011; Roth & Coleman, 2008). Their maturity and professional and life experiences created a sense of perspective that younger men may lack. Non-traditional male students generally were not upset by the barriers they experienced, accepting them as a part of being a minority in a female-dominated profession (Smith, 2006). They simply resolved that these issues would not impede their success and found ways to incorporate their past occupational experiences as strengths.

The addition of a demographic question regarding history of military service was prompted by the researcher's personal experience working with military men in nursing, as well as literature suggesting that military nursing attracted men in higher numbers (O'Lynn, 2007). Military nursing offered men the opportunity to practice nursing in an environment that capitalized on their strengths. Additionally, Yalom (as cited in Zika and Chamberlain, 1992), in an early work on existential psychotherapy, concluded that positive life meaning, or purpose in life, was related to "strong religious beliefs, self-transcendent values, membership in groups, dedication to a cause, and clear life-goals (p. 134). Many of the characteristics noted by Yalom described current or former military members.

External Connections Facilitators

External Connections facilitators were defined as the *interpersonal* connections that emerged from the relationships men developed or cultivated with others inside of the nursing program who were valued or influential. The importance of mentorship and relationships for men should not be underestimated. One of the most frequently cited

barriers for men in nursing was the lack of mentors and role models (Meadus & Twomey, 2007; O'Lynn, 2004; Roth & Coleman, 2008; Smith, 2006; Stott, 2007; Villeneuve, 1994); thus, the provision of role models and mentors could be considered as one of the most potentially significant facilitators. The real difficulties may be in locating men who are willing to serve in this capacity and arranging mentoring opportunities that appeal to busy men at convenient times and in convenient formats. In 2011, the AAMN introduced an online mentoring forum as part of the AAMN Mentoring Task Force; the online forum was set up to address some of these hurdles (AAMN Strategic Plan, 2013). An updated presentation at the AAMN 2012 Annual Conference reviewed the program's progress. Eighteen mentoring dyads had been formed in the previous year and functioned for varying lengths of time; mentoring sessions commonly focused on the themes of networking, negotiating workplace issues, and formulating career goals (Galbraith, Lee, Curry, Romportl, & Williams, 2012).

While gender-related differences in socialization, decision-making, and communication functioned as facilitators for men in certain circumstances (Kleinman, 2004), the differences also created problems when men and women interacted in the educational or professional realm. Many men viewed themselves as simplifying things (Ellis et al., 2006) and focused more on goals rather than processes (Kleinman, 2004). Historically, boys were more likely to be socialized through family and sports interactions that focused on competition, with clearly defined leaders and status, strategies, and objectives. Girls were more likely to be socialized around the intricacies of relationships, focusing on fairness, inclusion, and negotiation (Kleinman, 2004; Tannen, 1996).

Men often selected nursing specialties that capitalized on their strength of decisiveness, and they have often preferred the more complex medical and technical aspects of nursing (Kleinman, 2004; Okrainec, 1994; Stott, 2007). Specialties such as intensive care, perioperative, and emergency departments were fast-paced, highly

autonomous, highly visible, and lucrative positions. These positions have had the added benefit of placing men into more contact with physicians and other stakeholders, possibly resulting in greater visibility, higher salaries, and more rapid promotions (Kleinman, 2004).

The fact that these same specialties were often considered “low-touch” was not surprising and perhaps more comfortable for some men as males may experience uncertainty regarding their ability to demonstrate caring nursing behavior, which is typically considered as feminine (Stott, 2007). Male students may “feel the need to work harder at caring, whereas female students tend to view it as something innate” (Grady et al., 2008, p. 319). Men also may have developed a heightened ability to “adjust to the environment…learning the art of mimicry” (Fisher, 2009, p. 2672) in order to be regarded as a nurse and to meet perceived patient expectations. One of Fisher’s participants described it as “presenting yourself in different ways. A chameleon thing” (2009, p. 2672). For example, when working with female patients, these Australian men in nursing talked about their wives and children and used more therapeutic touch; when working with male patients, their touch was briefer and more casual and their conversations focused on cars, sports, or other typically “blokey or macho” (Fisher, 2009, p. 2672) topics. They characterized this as being culturally sensitive.

Men in nursing also have adopted beneficial adaptation skills in the provision of intimate care to female patients, as they assumed an extra-professional manner (Anthony, 2006) and relied more on communication, patient body language, and a “gut-feeling” (Fisher, 2009, p. 2674) to assess patient anxiety. Men utilized another staff member to assist in care if needed, to ensure both patient comfort and their own sense of professional safety, especially when dealing with children or adolescent females (Fisher, 2009).

Interestingly, two male midwives were included in Fisher's (2009) sample; their reflections illustrated how this gender-based difference can function as a facilitator. The men addressed their own reliance on clinical symptoms as indicators for interventions during labor, rather than heavy utilization of vaginal examination, which was the method favored by female midwives. They believed that their female colleagues were more likely to depend on vaginal examination rather than patient observation and interaction. The men mentioned that their own assessments, based on their patient's behaviors and their own knowledge of signs and symptoms of labor, were rarely wrong (Fisher, 2009).

Institutional Facilitators

Institutional facilitators were defined as structural or organizational aspects of nursing programs or institutions that were designed to ease constraints in nursing student activities or to eliminate barriers identified by male nursing students. These facilitators often addressed issues identified by male nursing students in the educational setting. For example, textbooks, classroom materials, and examination questions required periodic inspection to ensure that they included both male and female perspectives and preferences (Anthony, 2006). Shared collegiate environments such as nursing skills labs and student lounges, as well as common use items such as class photographs or invitations to class events needed to be designed in gender-neutral colors, with aspects that appealed to both men and women (LaRocco, 2006; Meadus, 2000; Stott, 2007). Faculty, administration, and staff required periodic reminders about two fairly common gender-related differences. First, both men and women were drawn to nursing for a variety of valid reasons that included salary considerations and career opportunities, in addition to the desire to serve (LaRocco, 2006). Second, the ability of faculty and staff to recognize and support caring behavior as expressed by both men and women was critical; it was important and affirming for faculty and students to learn about gendered ways of caring (Grady et al., 2008).

Some possible Institutional facilitators proposed in the literature required intentional efforts and were likely to generate significant discussion. As mentioned previously, many men in nursing preferred acute practice areas; Brady and Sherrod (2003) suggested that more high-technology clinical practice areas such as critical care, the emergency department, and operating room/anesthesia should be included in the curriculum as a way to recruit and retain men. In view of widely documented difficulties with the obstetric rotation (Keogh & O'Lynn, 2007; Sherrod, 1991; Smith, 2006; Whittock & Leonard, 2003), Smith (2006) questioned the necessity of keeping the obstetric rotation as a program requirement.

Incorporating male expectations and concerns into nursing education may be viewed as challenging to female faculty (Anthony, 2006), but it was critically important. Research has indicated that male nursing students preferred science-based and technical courses, although neither gender enjoyed studying statistics (Okrainec, 1994). Male students preferred less emphasis on community health and the psychosocial aspects of nursing (Ellis et al., 2006). Since these topics were an important part of the body of baccalaureate nursing knowledge and understanding them was necessary for NCLEX-RN success, perhaps a solution might be to reframe the coursework and emphasize its practicality and utility. Additionally, many male students preferred independent and self-directed learning over the cooperative style (Brady & Sherrod, 2003; Stott, 2007), yet female faculty often defaulted to the familiar and female-favored group projects.

Simulation has continued to play a significant role in many nursing programs. Grady et al. (2008) found that men were more receptive and positive about training on an interactive manikin; they also achieved higher performance scores. Anatomical, but non-interactive, manikins produced no gender-correlated differences in performance. As a possible facilitator, male students could be encouraged to work as student simulation

assistants, student mentors, and scenario development assistants, either for credit or for salary.

Another way that institutions could accommodate gender-based differences, especially for older male students with jobs or families, might be to ensure that support services such as the bookstore, faculty advising times, and student tutoring offer appointments or services that are convenient to non-traditional students (Smith, 2006). Bouden (2008) examined nursing students who considered leaving but stayed in their nursing programs and found that the combination of personal problems with the stressors of student life was critically important. When students felt supported, they were able to persist even though several did not seek out specific support services. The perception of being fully supported was enough to make a difference for some students.

The identification and determination of relative importance of facilitators to male student success in nursing education programs was of acute interest for several reasons. First, identification of important facilitators offered the potential to enhance student success through the provision of effective student support and connection networks. Second, the identification of important facilitators empowered nursing faculty and administrators to create programs and services that were valued by students. Third, understanding which facilitators were most strongly associated with the perception of overall success in nursing presented a possible prioritization tool for timely recruitment, development, and retention interventions. Clearly, increasing the number of successful male nursing students results in a larger, better-prepared and more diverse nursing profession.

Summary and Critique

Important findings from the literature review supported the idea that the topic of facilitators for men during nursing education was a largely unexplored phenomenon. This was supported partially by the lack of instruments found in the literature that

addressed this topic. Six quantitative instruments were located that addressed facilitators or barriers for men in nursing (Keogh & O'Lynn, 2007; Meadus & Twomey, 2007; Okrainec, 1994; O'Lynn, 2004; Romen & Anson, 2005; Smith, 2006), but none of these specifically targeted facilitators for men in nursing education, and none provided evidence of complete psychometric testing.

The purposes of this study were (a) to determine the psychometric properties of the survey after analyzing and incorporating comments provided by respondents to the earlier version of the SFM and undergoing review by content experts with revision as indicated, (b) to identify variables associated with facilitators for men during nursing education, and (c) to clarify the relationship that purpose in life played for men during nursing education.

CHAPTER 3. METHODOLOGY

Chapter 2 noted the absence in the literature of any quantitative instruments that adequately assessed facilitators for men during nursing education. Because no satisfactory survey existed, the SFM during nursing education was developed. The SFM utilized an earlier piloted version as well as a thorough review of the literature during development. Five important barrier items identified in O'Lynn's IMFNP (2007) were reworded to serve as potential facilitators in the SFM. This chapter discusses the analyses associated with supporting validity, reliability, and psychometric evaluation of the SFM.

Preliminary Instrument Work for the SFM

An earlier version of the SFM was created and piloted in 2009 as part of an unpublished study (Bidwell & Richison, 2009).) that examined male nursing student and alumni opinions of barriers and facilitators for male success during nursing education. A sample of 57 male students and RN alumni of a private Midwestern school of nursing completed the IMFNP as the first step. Respondents then were asked to evaluate a list of 10 items believed to be important to male success in nursing programs. These items were developed from the literature and from anecdotal conversations with male students and colleagues in nursing. Participants rated these items on a scale of 1 (*most important*) to 10 (*least important)*. Items with lower scores indicated that men considered these items more important for male success in nursing programs than items scored more highly, thereby supporting face validity. This instrument (the early version SFM) also contained an additional qualitative component in which respondents could write "anything else you would like to tell us about factors influencing male success in nursing" (Clark-Ott, 2009).

The mean age for all respondents was 38 years old, with a range of 20–63 years of age. Eighty-four percent of the men identified as Caucasian. Almost 95% noted that

their nursing program did not have male mentors, but over 91% reported the presence of other men in their programs. Fifty-six percent of respondents reported having male nursing faculty.

In the Barriers and Facilitators section, all of the item means were between 3.67 and 4.54 on a scale of 1 (*most important*) to 10 (*least important*). The most important items to this sample of men included the presence of faculty mentors (3.67) and friends (3.77). Also very highly ranked were instruction on gender differences in caring behavior (3.82), the presence of other male students in classes and clinical settings (3.84), instruction about gender differences in communication (3.92), instruction on men's health issues (4.01), and instruction on the use of touch (4.12). Slightly less important were the use of varied instructional methods (4.52), presence of male clinical preceptors (4.52), and information on the history of men in nursing (4.54). Refer to Table 1 for specific information.

The sample contained almost 16% pre-licensure nursing students (n = 9). Examining student results separately demonstrated interesting similarities and differences in the two groups. While both groups considered the presence of faculty mentors as the number one facilitator for success during nursing education, the second most important item for students was receiving instruction on appropriate use of touch (4.25), followed by the presence of other male students (4.33). Instruction on gender differences in caring behavior (4.37) was tied with instruction on men's health issues (4.37). Other facilitators for success, in order of student ranking of importance, were use of alternate educational methods (4.55), friends (4.66), instruction on gender differences in communication (4.88), presence of male RN preceptors (5.44), and information on the history of men in nursing (6.22).

The all respondent group had a narrower range of means than the student group: 3.67 to 4.54 as compared with the student range of 3.88 to 6.22. Not surprisingly, while

students rated instruction on appropriate use of touch and also the use of alternate educational methods as very important, practicing RNs gave both of these items less importance. In this sample both groups placed the least importance on the same two items: having male RN clinical preceptors and information on the history of men in nursing.

Table 1

Preliminary SFM (2009) Items Important to Male Success in Nursing Programs

SFM Items	Rank	Mean Range	*M*(*SD*) *n*	Rank	Mean Range	*M*(*SD*) *n*
		All Respondents			Student Respondents	
Presence of 1–2 faculty mentors	1	1–9	3.67(2.04) 56	1	1–10	3.88(3.25) 9
Presence of 1–2 supportive friends	2	1–10	3.77(2.59) 57	7	1–8	4.66(2.50) 9
Instruction on gender differences in expression of caring	3	1–9	3.82(2.46) 57	4.5	1–10	4.37(3.20) 8
Presence of other male students in classes and clinicals	4	1–10	3.84(2.75) 57	3	1–9	4.33(2.50) 9
Instruction on gender differences in communication	5	1–8	3.92(2.08) 57	8	1–9	4.88(2.97) 9
Instruction on mens' health issues	6	1–10	4.01(2.43) 56	4.5	1–7	4.37(1.92) 8
Instruction on appropriate us of touch	7	1–10	4.12(2.39) 56	2	1–9	4.25(2.71) 8
Use of alternate education methods	8.5	1–10	4.52(2.36) 57	6	2–10	4.55(2.78) 9

Table continues

Presence of male RN clinical preceptors	8.5	1–10	4.52(2.95)	57	9	2–10	5.44(2.65) 9
Information on history of men in nursing	10	1–10	4.54(2.79)	57	10	1–10	6.22(2.86) 9

Limitations to this study included the size and characteristics of a purposive sample as well as the simplicity of design and analysis. The use of a larger and more diverse population would increase power and provide additional support for validity; stronger design and analysis would better support reliability and validity, as well as increasing the likelihood that study results accurately reflected reality for men in nursing. On the whole, these 10 items were ranked as important to men during nursing education by this sample, but the qualitative comments indicated a need for further development of this beginning scale. This initial SFM demonstrated great potential for increasing usefulness, especially after additional development and rigorous psychometric testing.

Design

This study psychometrically evaluated the SFM in nursing education instrument, followed by examination of the importance of variables associated with success for men during nursing education. The conceptual model was guided by O'Lynn's (2004) concept of male friendliness in nursing education and by Frankl's (1955) concept of the will to meaning and purpose in life. First, comments from an earlier, piloted version (Clark-Ott, 2009) of the SFM underwent qualitative inquiry for possible incorporation into the SFM instrument. Second, a psychometric design was utilized to determine the psychometric properties of the SFM. Third, because the SFM demonstrated acceptable psychometric properties, a descriptive, cross-sectional design was used to determine the variables that best explained success for men during nursing education. The dependent variables were self-reported GPA at baccalaureate graduation, the number of NCLEX attempts required for successful passage, and the respondent's current perception of his own

overall nursing success. The independent variables were the respondents' assessments regarding how much they experienced the presence of Internal facilitators, External Connections facilitators, and Institutional facilitators in their nursing programs. Respondent demographic characteristics were collected in order to provide a more complete description of the sample and to support any associated relationships. Respondents also completed the PIL assessment (Crumbaugh & Maholick, 1964). A non-random and representative convenience sample of men in nursing in multiple locations was utilized. In order to assess test-retest reliability, a smaller subsample completed the same survey at a minimum of two weeks after initial response.

In the original 2009 survey, a number of respondents provided comments. The existing SFM items were utilized as a predetermined code list, following the method guiding qualitative inquiry outlined by Miles and Huberman (1984). The original survey comments were grouped under existing SFM items in order to inspect for items considered important to survey respondents but not contained in the SFM. Any items mentioned in the original comments but not addressed in the SFM were incorporated into the SFM instrument prior to content expert review and psychometric testing.

The participants for this study were 145 baccalaureate alumni from two Indiana schools of nursing, current and former male nurse officers of the 445th Airlift Wing, Wright-Patterson Air Force Base, Ohio, and other male military nurse officers. In addition, interested members of the AAMN professional organization were invited to participate. Participants also were encouraged to send the electronic survey link to other interested men in nursing. Although Tabachnick and Fidell (2007) suggested the general rule of 300 cases for factor analysis, they noted that fewer cases could be sufficient. Tinsley and Tinsley (1987) recommended 5–10 subjects per item to a maximum of 300, and DeVellis supported the position by noting that "larger samples increase the generalizability of the conclusions reached by means of factor analysis" (2003, p. 137).

The SFM initially contained 47 items but the number was reduced to 13 items as a result of content expert review and item analysis.

Inclusion criteria for the sample included:

1. Respondents were male, 18 years of age or older.
2. Respondents were able to read, write, and comprehend English and possessed the ability to respond to an online or paper survey.
3. Respondents were graduates of a baccalaureate nursing program in the United States.
4. Respondents were willing to respond to and complete an online survey; a smaller subsample were willing to complete the online survey a minimum of two weeks after initial response.

The exclusion criteria for the sample included:

1. Respondents who were female, less than 18 years of age.
2. Respondents who were currently students in a baccalaureate program.
3. Respondents attended a diploma or associate degree nursing program without baccalaureate program completion.
4. Respondents enrolled in but failed to graduate from a baccalaureate program.
5. Respondents graduated from a baccalaureate program outside the United States.

Procedure

After approval (Appendix B) was received from the Indiana University–Purdue University Indianapolis Institutional Review Board (IRB) and permission was received from the cooperating sites, potential study participants were contacted electronically by their institutions or organizations and invited to participate. Informed consent was provided through an emailed study information sheet (Appendix C) serving as a cover

letter and describing the study's purpose and voluntary nature. The email contained a personal message from the researcher inviting survey participation and provided a link to the online survey, posted at the website surveymonkey.com. In addition, contact information was provided for those desiring to complete the survey by hand, although no respondents selected this option. Submission of a completed survey was considered as consent for participation. Completed surveys were screened for inclusion and exclusion criteria.

The institutions and professional organizations participating in this research preferred not to share their mailing lists but sent approved information to their members. After respondents selected the link to the electronic survey that was contained in the institutional or organizational email, they viewed the study information sheet and researcher invitation to participate. They were encouraged to call a listed contact number if they had questions and were reminded that survey participation was voluntary and that the survey could be exited at any time. Respondents who selected the online survey then completed responses to individual items in the SFM, the demographic sheet, and the PIL. To support test-retest reliability, participants were asked to indicate on the demographic sheet if they were willing to complete the survey again in approximately two weeks. Respondents also were asked to select a separate link to provide a mailing address for gift cards. When a completed survey response was received, a $10 Walmart gift card was mailed to the respondent, provided that he included a mailing address.

Protection of Human Subjects

After the research proposal was approved by the researcher's dissertation committee, the proposal was submitted to the Indiana University–Purdue University Indianapolis IRB. The chairman of Indiana Wesleyan University's IRB had confirmed earlier to the researcher that Indiana University–Purdue University Indianapolis IRB

approval would be sufficient for Indiana Wesleyan University IRB approval. The AAMN's Education Committee reviewed the survey and approved it for use with membership. The 445th Airlift Wing at Wright-Patterson Air Force Base, Ohio, previously had granted permission for survey use among interested male nurse officers. The survey information was sent electronically to contact personnel, who offered it to interested members. All respondents were invited to forward the survey link to other interested men in nursing.

Once respondents selected the link to the electronic survey, they viewed information about the study purposes, risks, and benefits. Participants were encouraged to call a listed contact number if they had questions, and they were reminded that survey participation was voluntary, and that the survey could be exited at any time. There was no medical information collected and all responses were self-reported. The survey took 15 minutes or less to complete.

Data were collected periodically as they were entered on the website surveymonkey.com. Data were assigned a tracking number, de-identified, and maintained in a separate location from contact information provided by respondents for gift card mailings. Aggregate rather than individual data were reported to protect respondent anonymity.

Risks for participation in this research were minimal. Possible risks may have included psychological discomfort for respondents as they recalled emotionally painful episodes that occurred during nursing education. Respondents experiencing psychological discomfort could have elected not to answer a specific question or could have exited the survey at any time. They were provided with contact information for the researcher, or they could have chosen to contact their own healthcare providers for follow-up if desired.

There was a slight risk for loss of confidentiality because some of the participants could have been acquainted personally with the researcher. Participant privacy was

protected through the online format; no paper copies of the surveys were submitted. Privacy also was protected through the use of two separate databases. A subject tracking database contained study identification numbers assigned to identifiable data such as names, contact information, and IP addresses. A separate outcome database contained study identification numbers and survey responses. The databases were maintained separately in a secure location. Confidentiality of data was ensured through use of a password-protected laptop stored in a secure location. Secure data storage was maintained through the use of the research file system, a HIPAA-aligned system that was backed up nightly. Data were stored on the researcher's institutional school of nursing research file system folder.

Data were collected on the website surveymonkey.com and downloaded periodically into a Microsoft Excel spreadsheet for importation into IBM SPSS Statistics (ver. 22). Once data were collected into SPSS, responses were inspected closely for accuracy and conformance with inclusion and exclusion criteria. Survey completion reminders were sent again to non-respondents at two weeks after the initial invitation. Participation was encouraged through the incentive of a $10 Walmart gift card mailed to respondents who selected a separate link and included a mailing address. In order to estimate test-retest reliability, participants were asked to select a box on the demographic form if they were willing to complete the survey again in approximately two weeks. Participants who completed a second survey received a second Walmart $10 gift card, as long as they had provided a mailing address.

Variables and Instruments

In the SFM, the independent variables were the respondents' assessments regarding how much they experienced the presence of Internal facilitators, External Connections facilitators, and Institutional facilitators in their nursing programs. Respondents also completed the PIL assessment (Crumbaugh & Maholick, 1964). The

dependent variables were self-reported GPA at baccalaureate graduation, the number of NCLEX attempts required for successful passage, and the respondent's current perception of his own overall nursing success. Respondent demographic characteristics were collected in order to provide a more complete description of the sample and to support any associated relationships. The SFM and the respondent demographic characteristics form were developed by the researcher for this study. The PIL instrument was available in the public domain (Appendix D).

Respondent Demographic Characteristics

The respondent characteristics that were examined in this study were (a) demographic data, including current age and age at baccalaureate graduation, race and ethnicity (African American, Caucasian, Hispanic/Latino, Native American, Asian, or other), marital status, sexual preference, number of children, nursing student or RN status, educational degrees, employment status, perception of income level, history of military service, and birth order; (b) respondent's means of financial support during nursing education (full- or part-time jobs, employer tuition assistance, loans, scholarships, Veteran's educational benefits, personal/family savings, other); and (c) self-reported measures of nursing student success (GPA at baccalaureate graduation, the number of NCLEX attempts required for successful passage, and the respondent's current perception of his own overall nursing success).

Respondent demographic characteristics were compiled through use of a researcher-developed demographic characteristics form as previously described.

Internal Facilitator Variables

Internal facilitators were defined conceptually in this research as the intrapersonal strengths, experiences, and motivators that men brought to their pursuit of their nursing careers. These qualities have been associated in quantitative and qualitative literature with increased nursing student success for men. They included

items such as the student's vision or goal of himself as a RN, his personal certainty in the career choice he made, or his belief that he could make a difference in someone's life.

Internal facilitator variables were measured by the SFM instrument that was psychometrically tested during this research. The SFM measured the frequency with which men experienced individual facilitators during nursing education, utilizing three subscales of facilitators (Internal, External Connections, and Institutional). Participants used a 5-point Likert-type response scale to respond to the prompt "I experienced this"; responses range from 1 (*did not experience this*) to 5 (*a great amount [almost all of the time]*). Ten SFM items originally measured the subscale of Internal facilitators, with five remaining after content expert review and item and factor analyses. The Internal facilitators subscale was scored by totaling the five items; possible scores could have ranged from 5 to 25, with higher scores representing greater experiences of the Internal facilitators.

The SFM had not been previously psychometrically tested. A piloted version containing 10 items was utilized in 2009 (Clark-Ott) as part of another research project. Respondents (N = 57) evaluated the 10 items in terms of importance for male success during nursing education. Means for the 10 items listed ranged between 3.6 and 4.5 on a scale of 1 (*most important*) to 10 (*least important*). Having all mean scores clustered above the midpoint indicated that the respondents generally considered the items to be at least somewhat to moderately important, supporting face validity. The response rate of 53% also provided some support for the idea that face validity was useful in soliciting respondent cooperation through "ease of use, proper reading level, clarity, and appropriate response formats" (Netemeyer et al., 2003, p. 73).

External Connections Facilitator Variables

External Connections facilitators were conceptually defined in this research as the interpersonal connections that emerged from the relationships men developed or cultivated with others inside the nursing program who were valued or influential. External Connections facilitators included the availability of faculty to meet with students, faculty modeling caring behavior towards students, and having instructors who were “OK with men.”

Measurement of External Connections facilitator variables occurred through use of the SFM, which measured the frequency with which men experienced External Connections facilitators. The 5-point Likert-type response scale previously described was utilized for this purpose. Originally, five SFM items measured External Connections facilitator variables; however, the subscale was reduced to four items after content expert review and item and factor analyses. The External Connections facilitators subscale was scored by totaling the four items. Scores could have ranged from 4 to 20, with higher scores representing greater experiences of the External Connections facilitators.

Institutional Facilitator Variables

Institutional facilitators were defined in this research as structural or organizational aspects of nursing programs or institutions that were designed to ease constraints in nursing student activities or to eliminate barriers identified by male nursing students. These facilitators included instruction regarding gender differences in communication and caring behaviors, and schools of nursing marketing to and recruiting of men.

Institutional facilitator variables were measured by the Institutional subscale of the SFM. Participants used the 5-point Likert-type response scale previously described to respond to the prompt “I experienced this”; responses ranged from 1 (*did not*

experience this) to 5 (*a great amount*). Thirty-two SFM items originally measured Institutional facilitators; after content expert review and item and factor analyses, four items remained in the Institutional facilitator subscale. The Institutional facilitators subscale was scored by totaling the four items. Scores could have ranged from 4 to 20, with higher scores representing greater experiences of the Institutional facilitators.

After comments from previous SFM respondents were analyzed and incorporated into the current SFM, six content experts reviewed and evaluated the item pool to provide support for content validity of the SFM. Each of the content experts was doctorally prepared and had researched and/or published in the area of men in nursing; five were nurses, while the sixth was an educator/administrator. Content experts included the author of the IMFNP survey and multiple articles and books (O'Lynn), an education dean who researched non-traditional men in nursing (Smith), two internationally recognized authors and trailblazers for men in nursing (Pesut and Tranbarger), one Canadian nurse-educator (Twomey) and one American nurse-educator (Lee). According to Lynn's criteria, having six content experts permitted some room for disagreement yet still allowed for support of content validity for each item and the entire instrument (Lynn, 1986).

The experts were asked to review the pool of 47 items. Initially, they evaluated which facilitator domain (Internal, External Connections, or Institutional) seemed most appropriate for each item. Second, they used a four-point response scale, with 1 being *not relevant* and 4 being *very relevant and succinct*, to rate each item for relevance to the domain. Finally, experts were asked to comment on item clarity and suggest both possible revisions and any important but missing topics in the domains.

Content validity evaluation was guided by Lynn's (1986) procedures. The content validity index (CVI), or the proportion of experts endorsing an item as compared to the total number of experts, was calculated for domain assignment. For example, if the

expert chose a different domain for an item than was chosen by the researcher, the relevance rating would have been a 1, indicating non-relevance. With six experts, at least five needed to rate an individual item as either a 3 or a 4 in order to achieve a CVI of .86, which was the lowest acceptable value for content validity by Lynn's criteria. Suggestions for wording changes from content experts and new items were strongly considered for inclusion especially if they were judged to be conceptually important. Psychometric testing ensured adequate distribution, inter-item and item-to-total correlations, and support for acceptable internal consistency. Reliability and validity were assured prior to utilization of findings to test the hypothesized relationships in the model.

Purpose in Life

The concept of purpose in life was proposed by Viktor Frankl as the will to meaning and the essence of human motivation. Frankl's initial work in this area was cemented by his experiences in a Nazi concentration camp during World War II. Frankl believed that purpose in life could be developed in several ways including: (a) engaging in or creating something valued by the individual, (b) experiencing something or someone in a deep and profound way, or (c) choosing how one responds to the unavoidable sufferings of life. He believed that struggle clarified and strengthened individual motivation. The original PIL instrument was developed by Crumbaugh and Maholick in 1964 with Frankl's cooperation. It has been the instrument most often used to determine "the degree to which individuals experience a sense of meaning and purpose in their lives" (Moran, 2001, p. 271). Schulenberg and Melton (2010) posited that in order for meaning to be perceived, "individuals should be aware of what life aspects are most vital and live their lives consistently with those values" (p. 95). Morgan and Farsides (2009) theorized that purpose in life consisted of both a purposeful life and an exciting life.

The PIL (Crumbaugh & Maholick, 1964) was developed as a general tool to assess purpose and meaning in life; it has been widely utilized internationally to study different populations including college students, military veterans, employed workers, hospitalized patients undergoing psychiatric treatment, and alcoholics. Although it was originally developed with a quantitative as well as a qualitative component, the quantitative portion has been used most commonly for research purposes because it is relatively simple to compare across populations. This study utilized the quantitative portion of the PIL.

Although the original PIL instrument had a 7-point response scale and anchors were rotated to different ends of the scale (Molasso, 2006), the open-sourced PIL currently available has respondents using a 5-point response scale with consistent anchors. Both authors of the original 48-year-old survey are deceased; the survey contact organization (Psychometric Affiliates) did not respond to repeated requests for information. The use of the open-sourced 20-item tool was recommended by other researchers in the field (W. Millard and S. Schulenberg, personal communication, October 14, and 19, 2012, respectively) and differed only minimally from the written description of the original PIL. Each of the 20-item statements had a stem and a semantic differential scale, with possible responses ranging from one extreme to the opposite. Respondents were instructed to complete each statement, using a scale of 1 to 5, according to the number that corresponded to what was most true for them at the time. Some examples of PIL items were: “I am usually (1) bored” to “(5) enthusiastic” or “In thinking of my life, I (1) often wonder why I exist” to “(5) always see reasons for being here” (Crumbaugh & Maholick, 1964). Scores on the PIL could range from 20 to 100; higher scores were consistent with greater perceptions of meaning and purpose in life.

The 20-item PIL previously had undergone psychometric testing. Internal consistency and reliability have been supported through a coefficient alpha of .89

(Morgan & Farsides, 2009), split-half reliability of ".81, Spearman-Brown corrected to .90" (Crumbaugh & Maholick, 1964, p. 202), and a "test-retest reliability coefficient of .83" (Meier & Edwards, 1974, p. 384). Construct validity has been supported through both exploratory and confirmatory factor analysis. Morgan and Farsides (2007) performed Exploratory Factor Analysis (EFA) for PIL in a moderately sized sample (*N* = 200) of workers, retirees, and students; they examined dimensionality with a scree plot. They found two moderately correlated (.59) factors: exciting life (α = .88) accounted for 41% of variance, while purposeful life (α = .77) explained 8% of total variance. Confirmatory Factor Analysis (CFA) was performed by Schulenberg and Melton (2010) on a larger sample (*N* = 620) of students; findings from this sample supported Morgan and Farsides' (2009) two-factor model of exciting life and purposeful life. Schulenberg and Melton (2010) reported a .65 correlation between the two factors, with the factors sharing approximately 42% of the variance.

Notably, Schulenberg and Melton (2010) point out that much of the research related to PIL reliability and validity had been performed on samples with higher proportions of Caucasian women. Crumbaugh and Maholick themselves note that there was a "suggestive sex (gender) difference" (1964, p. 204) in their sample findings, with male PIL group means being 3 to 5 points lower than female PIL group means, depending on patient versus non-patient status. Meier and Edwards (1974) specifically examined for age and gender differences in the PIL. In a moderately sized Canadian sample of equal males and females (*N* = 200), they found no gender differences but did find lower PIL scores in the younger groups. Mean scores in the three groups ranging from 25 through to over 65 years of age had no significant differences.

Success in Nursing Education

Success in nursing education has not been well defined in the nursing literature, although there is much information available related to student retention in nursing

programs, particularly in specific populations. Success may be considered as more subjective than objective. Students may equate success in nursing education as program completion, or the “payoff being graduation,” according to one of Smith’s (2006, p. 266) respondents. Jeffreys (2007) made the point that the recruiting of students does not guarantee successful program completion, licensure as a RN, or accepting professional employment, all of which may be considered as indicators of success in nursing education. In this research, nursing success was defined broadly as both academic success and “the personal, psychological and spiritual integration” (Pesut, 2013) that were just as important for men in nursing as academic endeavors and professional practice.

Nursing success was evaluated using three criteria: (a) GPA at baccalaureate graduation, (b) the number of NCLEX-RN attempts needed for successful passage, and (c) the respondent’s current perception of his own overall nursing success. These data were collected on the demographic characteristics form accompanying the survey. The GPAs ranged from 2.6 to 4.0 while NCLEX attempts ranged from 1 to 3 because the number of NCLEX attempts permitted varied by state. For overall nursing success, respondents answered the following: “On a scale of 0 (*not at all successful*) to 10 (*extremely successful*), how successful overall do you think you are in your current nursing career?” Nursing success respondents were offered a range from 0 to 10; actual responses ranged from 1 to 11.

Data Analyses

In this study, the plan for data analysis included data screening procedures, description of the sample and instruments, and testing of the specific aims and hypotheses.

Data Screening Procedures

Responses were collected on the website surveymonkey.com and downloaded periodically into an Excel spreadsheet for importation into SPSS. After data were collected into SPSS, responses were inspected closely for completeness and accuracy, as well as conformance with inclusion and exclusion criteria. Descriptive statistics, outliers, means, and standard deviations were evaluated to assure accurate input. Missing data were assessed and remedied as suggested by Tabachnick and Fidell (2007). Normality, linearity, homoscedasticity, multicollinearity, and singularity were evaluated and addressed according to Tabachnick and Fidell's recommendations.

Description of Sample and Instruments

In order to provide a thorough description of the sample, all descriptive statistics were examined utilizing SPSS. Descriptive statistics for demographic characteristics data were summarized in frequencies and percentages. Internal consistency reliabilities were estimated for the SFM, Internal facilitator subscale, External Connections facilitator subscale, and Institutional facilitators subscale. The Internal consistency reliability met the established .70 threshold (Polit & Beck, 2006).

Specific Aims and Hypotheses

Data analysis for each hypothesis utilized SPSS to conduct the analysis. The level of significance used to test each hypothesis was $p \leq .05$. Specific aims and associated hypotheses, accompanied by the plan for data analysis, follow.

Specific Aim 1. Analyses of qualitative comments from respondents to the preliminary survey; incorporation of comments as indicated into the SFM during nursing education.

Hypothesis 1a. Qualitative comments from respondents to the preliminary survey ($N = 68$) were utilized as a predetermined code list for analysis, according to guidelines provided by Miles and Huberman (1984). Code list items were grouped under the

associated existing survey items. Any code list items that were not addressed already by existing survey items were evaluated for inclusion in the SFM. Therefore, the SFM contained items related to all major points addressed by respondents to the preliminary survey.

Specific Aim 2. Evaluation of the psychometric properties of the SFM.

Hypothesis 2a. Determine the degree of relevance of individual survey items and the entire scale through review by a panel of six content experts to establish support for content validity.

All content experts were selected after consideration of their training, experiences, research, and publications in the area of men in nursing, guided by criteria in Grant and Davis (1997). The content experts each received a content validity instrument for the SFM, accompanied by a cover letter, instructions for instrument completion, and definitions of terms (see Appendix E). The six experts were asked to return the surveys within two weeks and were provided with contact information for both the researcher and the principal investigator in the event of questions.

The experts were asked to rate each proposed SFM item based on two criteria: (a) the subcategory of facilitators to which the expert thought it belonged (Internal, External Connections, or Institutional) based on the conceptual definitions provided; and (b) the degree of relevance to the subcategory selected by the expert: 1 (*not relevant*), 2 (*slightly relevant*), 3 (*moderately relevant*), and 4 (*very relevant*). Blank space was provided next to each item for comments or edits that might have improved the item. At the conclusion of the list of items, blank spaces were provided for additional items or areas of the conceptual definition that the expert believed were not represented by the items or that should have been included.

Each proposed SFM item received a calculated Content Validity Index (I-CVI), based on the total number of experts rating the item as either 3 (*moderately relevant*) or

4 (*very relevant*), divided by six (the total number of experts). Utilizing six raters allowed for one rater to judge a single item as not relevant and still achieve an overall I-CVI of .83 that exceeded Lynn's (1986) recommended I-CVI of .78. After the I-CVI was calculated, a CVI for the entire scale (S-CVI) was calculated by summing the I-CVIs and dividing the total by the number of items, according to procedures described by Polit and Beck (2006). The acceptable threshold for the S-CVI remained at or above .78. In the event that the entire scale or selected items would have failed to meet the required limits for S-CVI or I-CVI, consideration would have been given to either revision and retesting or item elimination.

Hypothesis 2b. The survey items demonstrate means close to the center of the range for possible scores, indication of good variability, floor and ceiling effects less than 10% (DeVellis, 2003), and item-to-total correlations greater than or equal to .30 among men in nursing (Ferketich, 1991).

Data were entered and double-checked for accuracy prior to analyses utilizing SPSS. One-sample Kolmogorov-Smirnov *Z* tests were used to assess normality of distribution and descriptive statistics summed scales. Item analysis included the examination of item means, medians, standard deviations, and percentage ceiling and floor effects, which were hypothesized to be less than 10% according to DeVellis (2003). Internal consistency reliability was measured through examination of item-to-total correlations in order to assess how well each item fit with the other items and represented the general concept of facilitators for men in nursing education. Ferketich (1991) recommended that inter-item correlations remain within the range of .30 to .70, noting that items less than .30 were not well related and items greater than .70 were most likely redundant. Ferketich also recommended item-to-total correlations above .30. Items not meeting the recommended thresholds were assessed individually and

considered for possible removal pending examination through exploratory factor analysis.

Hypothesis 2c. The survey and domains have evidence of internal consistency reliability with Cronbach alphas greater than or equal to .70 among men in nursing (DeVellis, 2003). In considering alpha, it was critical to recall that alpha is “a function of scale length, average item-item correlation (covariance), and item redundancy” (Netemeyer et al., 2003). Internal consistency reliability was measured through examination of Cronbach alphas for the entire SFM survey and each domain, as determined by factor analysis. This assisted in evaluating how well each item fit with the other items and parsimoniously represented the general concept of facilitators for men in nursing education. The acceptable level for Cronbach alphas for the entire SFM and each domain was set at .70 as suggested by Netemeyer et al. (2003).

Hypothesis 2d. The survey and domains have evidence of two-week test-retest reliability with an intra-class correlation coefficient greater than .60 among men in nursing, as recommended by Shrout and Fleiss (1979). The temporal stability of the SFM was evaluated utilizing the test-retest methods discussed in Netemeyer et al. (2003). Willing participants completed the SFM twice, no less than two weeks apart. The correlation between the two scores was calculated utilizing the intraclass correlation coefficient (ICC) as described by Shrout and Fleiss. The acceptable ICC was set at .60, indicating moderate agreement by Landis and Koch’s (1977) criteria (.00–.20 = slight agreement, .21–.40 = fair agreement, .41–.60 = moderate agreement, .61–.80 = substantial agreement, .81–1.0 = almost perfect agreement).

Hypothesis 2e. The SFM provides evidence of support for construct validity with factor loadings of .32 and above for the scale and each domain as determined through factor analysis among men in nursing (Tabachnick & Fidell, 2007).

Because the domains of Internal, External Connections, and Institutional facilitators for men during nursing education were related conceptually to each other, there was a reasonable chance that survey items might overlap. Exploratory factor analysis with principal axis factoring and Varimax rotation was applied “to achieve parsimony by using the smallest number of explanatory concepts to explain the maximum amount of common variance” (Tinsley & Tinsley, 1987, p. 414), in support of construct validity. Preliminary data analyses preceding factor analysis included inspection of both the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett’s test of sphericity. As noted in Tabachnick and Fidell (2007), values of .60 and greater in the KMO and a finding of significance in Bartlett’s sphericity test supported the use of factor analysis by revealing relationships among the variables. Eigenvalues and scree plots were examined; Eigenvalues less than 1 and factors lying “below the elbow” in the scree plot were evaluated for deletion or retention, as suggested by Netemeyer et al. (2003) and Tinsley and Tinsley (1987). Factors were orthogonally rotated to examine how individual items loaded on specific factors. As outlined in Netemeyer et al. (2003), items with loadings between .40 and .90 were retained. Items outside of these values with important face or content validity were not automatically deleted, because Tinsley and Tinsley noted that even a smaller factor loading of .30 explained about 10% of the variance in that variable. Factor loadings were examined in terms of strength of loading and relevance to the proposed domains and overall construct. Any negative loadings would have been noted as well, due to their value in demonstrating what a factor was not, as suggested by Tinsley and Tinsley. Remaining facilitator domains were labeled appropriately; item-to-total correlations and Cronbach alphas for each domain were re-examined according to the established criteria.

Hypothesis 2f. The SFM provides evidence of support for criterion-related validity with significant correlations between the SFM and domains, and the PIL among men during nursing education.

Criterion-related validity of the SFM was evaluated by calculating and examining the Pearson product-moment correlation coefficients between the SFM overall scale and individual domains as determined by factor analysis, and the PIL.

Specific Aim 3. Determine the combination of independent variables that explains a significant amount of variance in (a) purpose in life, (b) GPA, (c) NCLEX attempts, and (d) perceived nursing success in men in nursing using a theoretically based conceptual model to provide further evidence of construct validity for the SFM.

Hypothesis 3a. Characteristics of male nursing students, Internal facilitators, External Connections facilitators, and Institutional facilitators explain a significant amount of variance in purpose in life for men in nursing

In order to further evaluate construct validity, multiple regression was utilized, guided by the conceptual model (Figure 1). As noted by Soeken in Waltz, Strickland, and Lenz (2005), “the goal is to explain the most variance in the set of variables or items with the fewest number of factors” (p. 162). Potential continuous or interval independent variables were evaluated for inclusion in the regression model predicting SFM and domains by inspection of a Pearson product-moment correlations table for independent variables in order to identify multicollinearity. Items with high correlations, generally .80 or greater (Field, 2005) were evaluated for additional inspection and possible remedy. Potential discrete or nominal independent variable screening occurred through evaluation of Independent Sample *t* tests and ANOVAs. The level of significance was set at $p \leq .05$ for inclusion of independent variables into the multiple regression. Discrete or nominal independent variables chosen for inclusion in the proposed were dummy-coded as suggested by Tabachnick and Fidell (2007).

Hypothesis 3b. Characteristics of male nursing students, Internal facilitators, External Connections facilitators, Institutional facilitators, and purpose in life explain a significant amount of variance in male nursing students' GPA upon baccalaureate graduation.

In order to further evaluate construct validity, multiple regression was utilized, guided by the conceptual model (Figure 1). The analyses utilizing multiple regression, including the screening for independent variables, was the same as those outlined in Hypothesis 3a except that the dependent variable was male nursing students' GPA upon baccalaureate graduation.

Hypothesis 3c. Characteristics of male nursing students, Internal facilitators, External Connections facilitators, Institutional facilitators, and purpose in life explain a significant amount of variance in male nursing students' number of NCLEX attempts prior to successful passage.

In order to further evaluate construct validity, multiple regression was utilized, guided by the conceptual model (Figure 1). The analyses utilizing multiple regression, including the screening for independent variables, was the same as those outlined in Hypothesis 3a except that the dependent variable was number of NCLEX attempts prior to successful passage.

Hypothesis 3d. Characteristics of male nursing students, Internal facilitators, External Connections facilitators, Institutional facilitators, and purpose in life explain a significant amount of variance in the perception of nursing success for men in nursing.

In order to further evaluate construct validity, multiple regression was utilized, guided by the conceptual model (Figure 1). The analyses utilizing multiple regression, including the screening for independent variables, was the same as those outlined in Hypothesis 3a except that the dependent variable was the perception of nursing success for men in nursing.

Summary

The global shortage of nurses and the under-representation of men in the nursing profession are profound problems that are compounded by nursing attrition rates which approach 50% (Bouden, 2008). This research attempted to quantify a previously unexamined area: the identification of important facilitators for men during nursing education. Knowledge of facilitators offers the potential to enhance male nursing student success through the provision of effective student support and connection networks. The addition of the PIL construct may demonstrate that it played a major role as a facilitator. Molasso indicated that “having a sense of purpose in life clearly contributes to establishing positive characteristics, strong values, and healthy mental attitudes” (2006, p. 2). The support for SFM reliability and validity provided a promising instrument to quantify the previously undefined construct of facilitators for men during nursing education. Understanding which facilitators are most strongly associated with the perception of overall success for men in nursing may be useful in the development and prioritization of valuable and timely recruitment, student development, and retention interventions. Clearly, increasing the number of successful male nursing students will result in a larger, better prepared, and more diverse nursing profession.

CHAPTER 4. RESULTS

The purpose of this research was to examine facilitators for men during nursing education, building on an earlier version (Clark-Ott, 2009) of the SFM during nursing education and continuing through the development and psychometric testing of the final instrument. This chapter begins with the data collection and cleaning procedures for the SFM, describes the study sample, and discusses reliability analysis. The discussion then moves to various aspects of psychometric testing for the SFM, and the chapter concludes with the results of statistical analyses of the research questions.

Data Collection and Cleaning Procedures

Data were collected electronically through the posting of the SFM on the website surveymonkey.com. Invitations to participate in the survey were emailed to individual email addresses for three groups of potential respondents (Indiana University alumni, Indiana Wesleyan University alumni, United States Air Force Reserve 445th Airlift Wing personnel), while a fourth group (AAMN) received the electronic invitation that was emailed directly from the participating organization (see Appendix C). Respondents also were encouraged to forward the survey to other interested parties, if possible. Data were collected on the website surveymonkey.com and downloaded periodically into an Excel spreadsheet for importation into SPSS. Once data were imported into SPSS, responses were closely inspected for conformance with inclusion and exclusion criteria. Survey question responses (n = 216) were compiled in the website surveymonkey.com; included in those 216 responses were the 51 survey retests. After the retest responses were aligned with the original respondents, 20 cases were deleted due to current student status, lack of possession of a Bachelor of Science in Nursing (BSN) degree, or failure to have attained a passing NCLEX score. The final sample contained 145 respondents. The response rate was estimated to be at least 14%, given that over 1,000 survey invitations were issued electronically. Many, however, may not have been received;

multiple graduates on the two alumni rosters used to generate email addresses had graduated more than 10 years previously. Multiple invitations were returned with email addresses noted as being undeliverable. Additionally, snowball sampling was utilized for this population, making it almost impossible to determine how many were invited to participate.

Among the 145 useable responses, no SFM item contained more than 5% missing responses; missing responses were replaced with the group mean, as recommended by Tabachnick and Fidell (2007). Means, standard deviations, and outliers were evaluated through univariate statistics.

Dependent and independent variables were examined for normality using the Kolmogorov-Smirnov (K-S) test at a significance level of $p < .001$, as suggested by Mertler and Vannatta (2005). Several variables were found to have significant values using K-S: age, age at BSN, GPA, Nursing Success, Times NCLEX (was taken), INTscale, EXTCONNscale, and INSTscale. When skewness and kurtosis were examined more closely using techniques outlined in Tabachnick and Fidell (2007), age, age at BSN, and INSTscale were found to be positively skewed, while Nursing Success, INTscale, EXTCONNscale and PIL Total were found to be negatively skewed. One obvious outlier noted on histogram in the dependent variable Nursing Success was evaluated for possible removal; examination of descriptives with and without the case resulted in negligible differences, so the case was retained. Additional assumptions for homoscedasticity, multicollinearity, and singularity were examined as part of regression analysis and are discussed in that section. Suitability of the data for factor analysis was examined and verified through the use of the KMO measure of sampling adequacy and Bartlett's Test of Sphericity. The details of analysis are discussed in the factor analysis section.

Some of the variables were regrouped due to unequal group sizes prior to screening variables for possible inclusion as independent variables. Race was recoded into two groups: White or Caucasian, and All Other Responses (American Indian or Alaskan Native, Asian, Black or African American, Native Hawaiian or Pacific Islander). Marital status was recoded into two groups: married and all other responses (single, divorced, widowed, partnered, and engaged). Sexual preference was recoded into two groups: heterosexual and all other responses (homosexual, bisexual, transsexual, and prefer not to disclose). Number of NCLEX attempts was recoded into two groups: once and more than once (two or three times).

Description of Sample

Participants for the survey were recruited via email from four groups of potential respondents: Indiana University School of Nursing alumni, Indiana Wesleyan University School of Nursing alumni, selected male nurses from the U.S. Air Force Reserve 445th Airlift Wing personnel, and members of the AAMN. The first three group members were contacted by the researcher directly via email, according to information received from the organizations, while the fourth group (AAMN) posted an announcement and link to the survey on the group's website. Respondents were encouraged to forward the survey to other interested parties, if possible, making it difficult to determine which response originated from what source.

The sample consisted of 145 cases, as previously stated. Specifics of sample demographics are displayed in Table 2. The mean age of respondents was 41.4 years of age (median 40, mode 27), with a range between 23 and 84. The majority of respondents were Caucasian (86.9%) and non-Hispanic (91.7%). Sixty-two percent (n = 90) of respondents were married, while 29% were single, 4% were divorced, and 4% described themselves as either partnered or engaged. Children were a part of the lives of 55% of respondents, with the number of children ranging from one through

seven; five participants had children but failed to specify the exact number. Of those who did specify the number of children, the majority had three children (33.8%), followed by two children (29.7%), and one child (17%). Ten respondents (13.5%) had between four and seven children with some from blended families. Regarding sexual preference, of the 143 respondents, 120 (82.8%) identified as heterosexual, with 15 identifying as either homosexual (*n* = 12, 8.3%) or bisexual (*n* = 3, 2.1%), and 8 (5.5%) preferring not to disclose.

In terms of birth order, "last-born" respondents were the most prevalent (*n* = 55, 37.9%), followed by "firstborns" (*n* = 43, 29.7%) and then "middle-born" (*n* = 29, 20%). "Only" children made up the smallest segment of the sample (*n* = 17, 11.7%). While 139 respondents answered that they were not pre-licensure nursing students, 6 replied affirmatively. When these responses were examined more closely, it was determined that the question may have been poorly worded or misunderstood, since this group consisted of three who possessed a Master's of Science in Nursing (MSN) degree, one holding a Doctorate of Nursing Practice degree (DNP); one who had passed the NCLEX recently, and one who was scheduled to retake the NCLEX. Four respondents (2.8%) left the BSN question blank; these four were the three MSN graduate and the one DNP graduate. Respondents in general were a highly educated group: 42.8% (*n* = 62) of the 145 reported achieving an MSN, 4.8% (*n* = 7) held a DNP, and 4.8% held a PhD degree.

Age at receipt of BSN degree ranged from 21 to 57 years of age, with a mean of 29.7 (8.4), median of 27, and mode of 22. The participants' GPA ranged from 2.6 to 4.0, with a mean of 3.5, median of 3.6, and mode of 3.8. Eighteen respondents left this question blank. Two of the 144 respondents who answered this item did not pass the NCLEX: one was preparing to take it for the first time and one was preparing to retake it. One hundred and twenty-eight nurses answered how many times they took the NCLEX.

Answers ranged from one to three times; almost 77% passed on their first attempt, and the rest took it twice (9.7%) or three times (2.1%).

Over one-quarter of the sample (27.6%) were veterans of military service, with a range of time in service from 1 to 38 years and a mean of 12.3 years. Respondents were asked how they supported themselves while obtaining their nursing education; more than half of the students had a part-time job (54.5%) or a full-time job (50.3%), and 51% had a student loan. Almost 38% utilized personal or family savings, while others received scholarships (36.6%), employer tuition assistance (18.6%), and/or veteran education benefits (13.1%). Generally, over 73% of students utilized between one and three means of support, with three being the most common (26.2%). The remainder of students ranged from four to six means of support utilized.

In terms of current employment status, over 86% (*n* = 125) of respondents were employed full-time in nursing, while 5.5% were employed part-time in nursing. A few (1.4%, *n* = 2) were employed but not in nursing, while 2.8% (*n* = 4) reported being unemployed; 2.8% were retired. Regarding income, 80.7% (*n* = 117) nurses in this sample reported being comfortable, while 17.2% (*n* = 25) said they had enough to make ends meet, and 2.1% (*n* = 3) stated that their income was not enough to make ends meet.

Respondents were asked to rate their overall success in their current nursing career on a scale of 1 to 10. While the mean was 9.4, responses ranged from 1 to 11. Eighty percent of these nurses rated their current success level as a 9, 10, or 11, with almost all of the rest ranging among 6, 7, or 8. One respondent reported a very challenging week at work and rated his nursing success as a 1. This item had only two missing cases: one was a retired nurse and the other was a graduate who was retaking the NCLEX. The specifics of sample demographic results are listed in Table 2.

Table 2

Sample Characteristics

Sample Characteristic (*n* = 145)	*f* (%)	*M* (*SD*) Range	Missing
Age	143 (98.6%)	41.4 (13.7) 23–84	2 (1.4%)
Race	137 (94.5%)		8 (5.5%)
American Indian/Alaskan Native	2 (1.4%)		
Asian	4 (2.8%)		
Black or African American	4 (2.8%)		
Native Hawaiian or Pacific Islander	1 (0.7%)		
White or Caucasian	126 (86.9%)		
Other (not mutually exclusive)	8 (5.8%)		1 (0.7%)
½ white, ½ Asian	1 (0.7%)		
Ethiopian American	1 (0.7%)		
Haitian African American	1 (0.7%)		
Hispanic	3 (2.1%)		
Human	2 (1.4%)		
White and Native Hawaiian	1 (0.7%)		
Ethnicity	140 (96.6%)		5 (3.4%)
Hispanic or Latino	7 (4.8%)		
Non-Hispanic or Latino	133 (91.7%)		
Marital Status	144 (99.3%)		1 (0.7%)
Single	42 (29%)		
Married	90 (62.1%)		
Separated	0		
Divorced	6 (4.1%)		
Widowed	0		
Partner/partnered	4 (2.8%)		
Engaged	2 (1.4%)		
Children	143 (98.6%)		2 (1.4%)
No	63 (43.4%)		
Yes	80 (55.2%)		
Number of Children	74 (49%)		5 (6.3%)
One	17 (23%)		
Two	22 (29.7%)		
Three	25 (33.8%)		
Four	2 (2.7%)		
Five	3 (4.1%)		
Six	4 (5.4%)		
Seven	1 (1.4%)		

Table continues

Sexual Preference	143 (98.6%)		2 (1.4%)
Heterosexual	120 (82.8%)		
Homosexual	12 (8.3%)		
Bisexual	3 (2.1%)		
Transsexual	0		
Prefer not to disclose	8 (5.5%)		
Birth Order	144 (99.3%)		1 (0.7%)
Only	17 (11.7%)		
First	43 (29.7%)		
Middle	29 (20%)		
Last	55 (37.9%)		
Pre-licensure Nursing Student	145 (100%)		0
No	139 (95.9%)		
Yes	6 (4.1%)		
BSN	141 (97.2%)		4
Yes	141 (97.2%)		
No	0		
Highest Other Degree Attained			
MSN	62 (42.8%)		
DNP	7 (4.8%)		
PhD	7 (4.8%)		
Age at Baccalaureate Graduation	134 (92.4%)	29.7 (8.4) 21–57	11 (7.6%)
GPA at Baccalaureate Graduation	127 (87.6%)	3.5 (0.3) 2.6–4.0	18 (12.4%)
Number of NCLEX Attempts	128 (88.3%)	1.2 (0.4 1–3	17 (11.7%)
Once	111 (76.6%)		
Twice	14 (9.7%)		
Three	3 (2.1%)		
Passed NCLEX	144 (99.3%)		1
Yes	142 (97.9%)		
No	2 (1.4%)		
Military Service	144 (99.3%)		1 (0.7%)
No	104 (71.7%)		
Yes	40 (27.6%)		
Length of Military Service	37 (25.5%)	12.3 (8.9) 1–38	1 (2.9%)

Table continues

Means of Support During Nursing Education (not mutually exclusive)			
Full-Time Job	73 (50.3%)		
Part-Time Job	79 (54.5%)		
Employer Tuition Assistance	27 (18.6%)		
Scholarships	53 (36.6%)		
Student Loans	74 (51%)		
Personal/Family Savings	55 (37.9%)		
Veteran Education Benefits	19 (13.1%)		
Total Means of support/Respondent	135 (98.5%)	2.6 (1.3) 0–6	2 (1.4%)
One	33 (22.8%)		
Two	35 (24.1%)		
Three	38 (26.2%)		
Four	25 (17.2%)		
Five	9 (6.2%)		
Six	3 (2.1%)		
Current Employment Status	145 (100%)		0
Employed full-time in nursing	125 (86.2%)		
Employed part-time in nursing	8 (5.5%)		
Employed but not in nursing	2 (1.4%)		
Retired	4 (2.8%)		
Unemployed	4 (2.8%)		
Income	145 (100%)		
Comfortable	117 (80.7%)		0
Enough to make ends meet	25 (17.2%)		
NOT enough to make ends meet	3 (2.1%)		
Nursing Success	143 (98.6%)	9.4 (1.4) 1–11	2 (1.4%)
1 (Not at all successful)	1 (0.7%)		
6	3 (2.1%)		
7	9 (6.2%)		
8	14 (9.7%)		
9	41 (28.3%)		
10 (Extremely successful)	41 (28.3%)		
11	34 (23.4%)		

Instruments

Descriptive statistics for all measures are presented in Table 3. The initial SFM 37-item measure had a mean of 132.6 (18.6), with an actual range of 91–185, while the possible range extended from 37–185. The 13-item SFM, refined through item analysis as part of psychometric testing, had a mean of 47.1 (8.1). This measure had an actual

range of 26–65, with a possible range of 13–65. Both of these ranges indicated that respondents were more likely to have experienced the specific facilitating items at least some of the time than never to have experienced them at all. The Internal facilitator subscale contained five items with a mean of 21.3 (3.3); actual range was 10–25, with a possible range of 5–25. The External Connections facilitator subscale had four items, with a mean of 16.3 (2.9). The actual range was the same as the possible range: 4–20. The Institutional facilitator subscale with four items had the lowest mean: 9.5 (4.4). The actual and possible ranges were identical at 4–20. The means and ranges suggest that this sample of nurses experienced more of the Internal facilitators, fewer of the External Connections facilitators, and even fewer of the Institutional facilitators. Both the SFM 37-item and the SFM 13-item scales, as well as the subscales, had satisfactory Cronbach alphas ranging from .89 to .81, thereby supporting internal consistency reliability and meeting the threshold for new scales of .80 established by Clark and Watson (1995).

The PIL instrument (Crumbaugh & Maholick, 1964) contained 20 items, with a mean of 80.8 (8.0). Possible range was from 2–100, with the actual range for this sample from 55–95, indicating that respondents tended to experience consistently higher than natural midpoint levels (60) of purpose in life. The dependent variable of Nursing Success consisted of a sole item that asked respondents to evaluate their overall success in their current nursing career on a scale of 1 (*not at all successful*) to 10 (*extremely successful*). Respondents (n = 143) had an overall nursing success mean of 9.4 (1.4). Although the possible range was 1–10, over 23% of respondents rated themselves as an 11 on the scale, making the actual range from 1–11. Many of the men in this sample considered themselves highly successful in their nursing profession.

Table 3

Descriptive Statistics for Measures

Measure	No. of Items	*n*	*M* (*SD*)	(Possible Range) Actual Range	Cronbach α
37-item SFM[a]	37	145	132.6 (18.6)	(37–185) 91–185	.89
37-item retest[b]	37	53	131.4 (15.1)	(37–185) 102–165	.84
13-item SFM[a]	13	145	47.1 (8.1)	(13–65) 26–65	.85
13-item retest[b]	13	53	46.7 (7.0)	(13–65) 31–62	.84
Internal facilitators	5	145	21.3 (3.3)	(5–25) 10–25	.81
External Connections facilitators	4	145	16.3 (2.9)	(4–20) 4–20	.82
Institutional facilitators	4	145	9.5 (4.4)	(4–20) 4–20	.82
PIL	20	145	80.8 (8.0)	(20–100) 55–95	.90
Nursing Success	1	143	9.4 (1.4)	(1–10) 1–11	NA

[a]Normal distribution using one-sample Kolmogorov-Smirnov Z tests ($p < .001$).
[b]Intraclass correlation (ICC) for 37-item SFM was .71 (95% CI = 0.55–0.82), $n = 53$; ICC for 13-item SFM was .72 (95% CI = 0.57–0.83), $n = 53$.

Although the descriptive statistics for the measures are listed in Table 3, these results are based on the psychometric testing of the SFM instrument, the details of which are presented as part of the Specific Aims and Hypotheses section. Fifty-three respondents indicated willingness to retake the survey at a minimum of two weeks following the initial response, in order to support test-retest reliability or temporal stability. The 13-item SFM had an initial Cronbach alpha of .85, with a two-week retest Cronbach alpha of .84. All three subscales had satisfactory Cronbach alphas: Internal facilitators subscale was lowest at .81, while the subscales for External Connections

facilitators and Institutional facilitators both had Cronbach alphas of .82, indicating satisfactory internal consistency reliability.

This section reviewed procedures for data cleaning, as well as describing the sample and the measures. The specific aims and hypotheses will be discussed next, beginning with the development and psychometric testing of the preliminary version of the SFM.

Specific Aims and Hypotheses

Specific Aim 1. To analyze comments from previous respondents to the preliminary survey and incorporate them as indicated into the current SFM during nursing education.

Hypothesis 1a. Qualitative comments from respondents to the preliminary survey (*N* = 68) are utilized as a predetermined code list for analysis, according to guidelines provided by Miles and Huberman (1984).

Hypothesis 1a was met. The code list items were grouped under the associated existing survey items. Any code list items that were not already addressed by existing survey items were evaluated for inclusion in the SFM. A total of 10 items from the qualitative comments were incorporated into the SFM, ensuring that the SFM contained items related to all major points addressed by respondents in the preliminary survey responses.

Specific Aim 2. To evaluate the psychometric properties of the SFM.

Hypothesis 2a. Determine the degree of relevance of individual survey items and the entire scale through review by a panel of six content experts to establish evidence of content validity.

Hypothesis 2a was addressed. Content experts were selected by considering their training, experiences, research, and publications in the area of men in nursing, guided by criteria in Grant and Davis (1997). The content experts each received a

content validity instrument for the SFM, accompanied by a cover letter, instructions for instrument completion and definitions of terms (see Appendix E). The six experts were asked to return the surveys within two weeks and were provided with contact information for both the researcher and the principal investigator in the event of questions.

The experts rated each proposed SFM item based on two criteria: (a) the subcategory of facilitators to which the expert thought it belonged (Internal, External Connections, or Institutional) based on the conceptual definitions provided; and (b) the degree of relevance to the subcategory selected by the expert. Blank spaces for comments were provided by individual items and at the end of the item list to allow suggestions and omissions.

Each of the 65 individual SFM items received a calculated Item I-CVI, based on the total number of experts rating the item as either 3 (*moderately relevant*) or 4 (v*ery relevant*), divided by the total number of experts responding to the item. Not all experts responded to every item. A total of 37 proposed items were retained for the SFM. Thirty-three items had an I-CVI of .83 or above. Three items with an I-CVI of .66 were retained after wording revisions, guided by the content experts' input. One item that was generated through the qualitative input received an I-CVI of .80 and was retained because of the uniqueness of the content. The total S-CVI was .93, well above the .78 threshold described by Polit and Beck (2006).

As a result of the content experts' input, the original three facilitator domains were expanded to four domains to improve item and scale clarity. While Internal facilitators and Institutional facilitators remained unchanged, the domain of External Connections facilitators was expanded to External Family and Friends and to External Nursing Program Connections.

Table 4 displays the retained SFM items with the associated I-CVI for each item. The qualitative input generated from Specific Aim 1 is included at the end of this table under the appropriate domains.

Table 4

Final Survey of Facilitators for Men (SFM) 37 Items

Internal (CVI) Facilitators Total Items: 10	External Family & Friends (CVI) Facilitators Total Items: 5	External Nursing Program Connections (CVI) Facilitators Total Items: 10	Institutional (CVI) Facilitators Total Items: 12
14. I had a strong vision or goal to be a nurse. (.83)	3. I received positive feedback about my career choice from people important to me. (1.0)	4. I developed caring relationships with some patients. (.83)	6. Faculty taught me gender-specific communication strategies to promote good working relationships. (1.0)
16. Being a nurse seemed like more than just a job to me. (.83)	15. Someone I cared about received excellent care from a man in nursing. (.66 wording revised)	10. Faculty demonstrated caring towards me. (1.0)	7. Faculty taught me how to touch patients respectfully when intimate care was needed. (1.0)
21. I plan to or have attended graduate school to further my career in nursing. (.80)	28. Some of my family and/or friends were nurses. (.66; wording revised)	22. Faculty was usually available to meet with me. (1.0)	8. My nursing school fostered a sense of “belonging” in students. (1.0)
23. I had prior volunteer or work experience providing patient care when starting nursing school. (1.0)	31. I had one or two supportive male friends while in nursing school. (1.0)	25. Clinical instructors were supportive of male students. (1.0)	9. Some of my teachers were men. (1.0)

Table continues

27. I thought my life as a nurse would be exciting. (.83)		26. There were one or more faculty members I felt comfortable going to for advice. (1.0)	11. My nursing program included a review of men's contributions to the nursing profession. (1.0)
32. I thought my life as a nurse would be interesting. (.83)		29. Faculty and staff were helpful when I became ill or had an emergency. (.83)	13. Men were included in school of nursing images, displays, marketing and recruitment materials. (1.0)
34. I was confident in my decision to become a nurse. (.83)		33. There were other male nursing students in classes and clinicals. (1.0)	17. My nursing program actively recruited men to enroll as students. (1.0)
			19. I had opportunities to work with male RNs in my clinical rotations. (1.0)
			35. Faculty taught me that caring may be expressed differently by men and women. (1.0)
Items from Qualitative Input			
12. I felt comfortable interacting with females most of the time. (1.0)	5. I kept social interactions separate from professional interactions. (.80)	1. I felt accepted/ respected by most patients during my clinical rotations. (1.0)	2. There were opportunities to participate in a group supporting men in nursing. (1.0)
18. I believed that completing the nursing program was a way to achieve my long-term goals. (.66; wording revised)		24. Male mentors helped me understand how to maintain a male identity in a female-dominated profession. (1.0)	20. I was assigned both male and female patients. (1.0)

Table continues

37. I felt comfortable interacting with males most of the time. (1.0)	36. Patients gave me positive feedback. (1.0)	30. I was assigned patients with a wide range of conditions. (1.0)

Hypothesis 2b. The survey items demonstrate means close to the center of the range for possible scores, indication of good variability, floor and ceiling effects less than 10% (DeVellis, 2003), and item-to-total correlations greater than or equal to .30 among men in nursing (Ferketich, 1991).

Hypothesis 2b was partially met. Table 5 contains the item statistics and factor loadings for the 37-item SFM, developed through the content expert input and content validity procedures. The individual items demonstrated good variability, but both floor and ceiling effects greatly exceeded the 10% recommended by DeVellis (2003). In addition, almost one-third of the 37 SFM items failed to meet the specified item-to-total correlation threshold.

Table 5

*Item Statistics and Factor Loadings for the 37-item SFM (*n = *145)*

SFM Item Response to "I experienced this"	Mean (*SD*)[a]	% Ceiling "Great amount"	% Floor "Did not"	Item-to-total Correlation	Factor Loading
1. Patients' acceptance/respect	4.3 (0.7)	42.8	0	.37	.42
2. Male group support opportunities	1.8 (1.3)	6.2	62.1	.46	.42
3. Positive feedback	4.2 (1.0)	46.2	2.1	50.00	.56
4. Caring patient relationships	4.2 (0.9)	42.8	2.1	.37	.41
5. Keep social life separate	4.1 (1.0)	42.1	2.8	.07	.08
6. Gender communication skills taught	2.1 (1.3)	6.2	47.6	55.00	.55
7. Respectful touch taught	3.2 (1.5)	26.9	17.9	.44	.46
8. SON fostered belonging	3.6 (1.2)	25.5	7.6	.57	.64
9. Male faculty	2.1 (1.3)	9.0	40.7	.29	.28
10. Caring faculty	4.0 (0.9)	29.0	0.7	.62	.70
11. Men's role in nursing history taught	1.6 (1.1)	4.1	70.3	.51	.47
12. Ease interacting with female	4.4 (0.7)	49.0	0	.39	.45
13. SON marketed to men	2.8 (1.3)	13.1	17.9	.59	.59
14. Had goal of RN	4.2 (1.0)	47.6	2.1	.43	.52
15. Saw male RN nursing care	2.8 (1.6)	24.1	36.6	.29	.27
16. Nursing more than job	4.4 (0.9)	55.2	2.1	.29	.33
17. SON recruited men	2.3 (1.4)	11.0	37.9	.62	.62
18. Graduation step to goals	4.5 (0.8)	63.4	1.4	.38	.48
19. Had male RN preceptors	2.7 (1.4)	17.9	23.4	.55	.55
20. Assigned male & female patients	4.5 (0.8)	62.1	0	.27	.33

Table continues

21. Had grad school plan	4.4 (1.3)	73.8	9.0	.09	.10
22. Faculty available to meet	4.3 (0.8)	44.8	0.7	.43	.51
23. Had prior patient care experience	3.3 (1.8)	44.8	30.3	.17	.17
24. Male mentors modeled male ID in female profession	1.9 (1.3)	5.5	56.6	.39	.38
25. Instructors OK with men	3.9 (1.0)	33.1	1.4	.51	.59
26. Comfortable with faculty	4.2 (0.9)	42.8	0.7	.47	.55
27. RN is exciting life	4.1 (0.9)	38.6	1.4	.51	.59
28. Friends & family are RNs	3.3 (1.6)	35.9	22.1	.26	.26
29. Faculty & staff helpful	3.4 (1.5)	28.3	20.7	.49	.54
30. Assigned all types of patients	4.5 (0.7)	59.3	0	.33	.41
31. Had one male friend	3.8 (1.4)	41.4	11.0	.47	.51
32. RN is interesting life	4.4 (0.7)	49.7	0	.47	.55
33. Other men in classes	3.9 (1.2)	39.3	3.4	.41	.44
34. Confident in RN decision	4.4 (0.7)	57.2	0	.44	.50
35. Gender caring difference taught	2.3 (1.5)	11.7	43.4	.53	.55
36. Had positive patient feedback	4.5 (0.6)	56.6	0	.31	.37
37. Ease interacting with males	4.5 (0.9)	63.4	2.1	.29	.32

[a]Total SFM Mean = 132.6; *SD* = 18.6; Range = 91–185; Alpha = .89.

Table 6 contains the item statistics and factor loadings for the 13-item SFM. The 13-item SFM was the result of conducting item analysis and factor analysis on the 37-item SFM. Thirteen items were retained for the SFM utilizing a three-factor solution: Internal facilitator factors, External Connections facilitators, and Institutional facilitators. The fourth hypothesized factor grouping, External Family and Friends facilitators, contained a total of five items. Of these five items, four items failed to meet item analysis or factor analysis criteria. One item that did meet item analysis criteria ("I received positive feedback about my career choice from people important to me") was grouped under Internal facilitators as a result of factor analysis.

Table 6

*Item Statistics and Factor Loadings for the 13-item SFM (*n = *145)*

SFM Item Response to "I experienced this"	Mean (*SD*)[a]	% Ceiling "Great amount"	% Floor "Did not"	Item-to-total Correlation	Factor Loading
1. Positive feedback	4.2 (1.0)	46.2	2.1	.48	.52
2. Gender communication skills taught	2.1 (1.3)	6.2	47.6	.51	.51
3. Caring faculty	4.0 (0.9)	29.0	0.7	.64	.72
4. SON marketed to men	2.8 (1.3)	13.1	17.9	.56	.56
5. Had goal of RN	4.2 (1.0)	47.6	2.1	.46	.58
6. SON recruited men	2.3 (1.4)	11.0	37.9	.59	.60
7. Faculty available to meet	4.3 (0.8)	44.8	0.7	.43	.52
8. Instructors OK with men	3.9 (1.0)	33.1	1.4	.58	.64
9. Comfortable with faculty	4.2 (0.9)	42.8	0.7	.49	.61
10. RN is exciting life	4.1 (0.9)	38.6	1.4	.53	.64
11. RN is interesting life	4.4 (0.7)	49.7	0	.47	.59
12. Confident in RN decision	4.4 (0.7)	47.2	0	.43	.49
13. Gender caring difference taught	2.3 (1.5)	11.7	43.4	.51	.52

[a]SFM 13-item Mean = 47.1; *SD* = 8.1; Range = 26–65; Alpha = .85.

The individual items demonstrated means acceptably close to the midpoint, with item means ranging from 2.1 (Gender communication skills taught) to 4.4 (RN is interesting life and Confident in RN decision). Good variability in relation to means was demonstrated by standard deviations ranging from 0.7 to 1.5 and a range of 26–65. Over one-half of the items exceeded the 10% ceiling effect recommended by DeVellis (2003); the highest ceiling effect was Confident in RN decision at 57.2%. Thirty-one percent of items exceeded the 10% floor effect, with the highest floor effect item being Gender communication skills taught at 46.6%. All 13 SFM items met the item-to-total correlation threshold of equal to or greater than .30 specified by Ferketich (1991). Item-to-total correlations ranged from .43 to .64, indicating satisfactory correlation without redundancy. Inter-item correlations ranged from .07 (RN goal and Faculty available) to .74 (RN is exciting life and RN is interesting life), with a mean inter-item correlation of .32, indicating sufficient relationship (Ferketich, 1991). One inter-item correlation was evaluated for the possibility of repetition: RN is exciting life correlated at .74 with RN is interesting life. Based on the fact that deletion of either item failed to increase the SFM 13-item scale's Cronbach alpha and based on the strength of support for the concept of dual dimensionality in recent confirmatory factor analysis work on the PIL instrument (Schulenberg & Melton, 2010), the decision was made to retain both items. Cronbach alpha for the 13-item SFM was .84; no individual item deletions resulted in an improved Cronbach alpha.

Table 7 contains the item statistics for the Internal (INT) facilitators domain. The 5-item subscale had a mean of 21.3 (*SD* 3.3), with a median of 22, a mode of 25, and a range of 10–25, all of which indicated fairly good variability in responses. Inter-item correlations ranged from .32 to .73; the items RN is interesting life and RN is exciting life were highly correlated at .73. The mean of inter-item correlations was .47, exceeding thresholds specified in Netemeyer et al. (2003). While none of the five items exceeded

the hypothesized 10% or less for floor effects, all five items exceeded this for ceiling effects. Many respondents reported experiencing great amounts of Internal facilitators, making this the most highly rated domain. The highest ceiling effect was noted for Confident in RN decision (57.2%), followed by RN is interesting life (49.7%), RN goal (47.6%), and Positive feedback from people important to me (46.2%); the lowest ceiling effect was for RN is exciting life (38.6%), which still exceeded the hypothesized 10% or less. All corrected item-to-total correlations ranged between .52 to .70, which met Netemeyer et al.'s (1996) retention criteria of between .50 and .80 for corrected item-to-total correlations. The INT subscale had a Cronbach alpha of .81, and no individual item deletion improved the Cronbach alpha.

Table 7

Item Statistics for the Internal (INT) Facilitators Domain

INT Item Response to "I experienced this"	Mean (*SD*)[a]	% Ceiling "Great amount"	% Floor "Did not"	Corrected Item-to-total Correlation	Alpha if Deleted
1. Positive feedback	4.2 (1.0)	46.2	2.1	.52	.80
5. RN goal	4.2 (1.0)	47.6	2.1	.70	.73
10. RN is exciting life	4.1 (0.9)	38.6	1.4	.61	.76
11. RN is interesting life	4.4 (0.7)	49.7	0	.63	.77
12. Confident RN decision	4.4 (0.7)	57.2	0	.55	.78

[a]INT Subscale Mean = 21.3; *Median* = 22; *Mode* = 25; Range = 10–25; Alpha = .81.

Table 8 contains the item statistics for the External Connections (EXTCONN) facilitators domain. The four-item subscale had a mean of 16.3 (*SD* 2.9), with a median of 16.0, a mode of 16 (the smallest of multiple modes), and a range of 4–20, all of which indicated fairly good variability in responses. Inter-item correlations ranged from .41 to .60, indicating that items are sufficiently related but not redundant (Ferketich, 1991). The inter-item correlation mean is .53, the highest of the three domains. While none of the four items exceeded the hypothesized 10% or less for floor effects, all four items exceeded this for ceiling effects. The high ceiling effects indicated that many respondents reported experiencing External Connections facilitators to a large degree. The highest ceiling effect was noted for Faculty available to meet (44.8%), followed by Comfortable with faculty (42.8%), and Instructors OK with men (33.1%); the lowest ceiling effect was for Caring faculty (29.0%), which still exceeded the hypothesized 10% or less. All corrected item-to-total correlations ranged between .58 to .69, which met Netemeyer et al.'s (1996) retention criteria of between .50 and .80 for corrected item-to-total correlations. The EXTCONN subscale had a Cronbach alpha of .82, and no individual item deletion improved the Cronbach alpha.

Table 8

Item Statistics for the External Connections (EXTCONN) Facilitators Domain

EXTCONN Item Response to "I experienced this"	Mean (*SD*)[a]	% Ceiling "Great amount"	% Floor "Did not"	Corrected Item-to-total Correlation	Alpha if Deleted
3. Caring faculty	4.0 (0.9)	29.0	0.7	.69	.75
7. Faculty available to meet	4.3 (0.8)	44.8	0.7	.58	.80
8. Instructors OK with men	3.9 (1.0)	33.1	1.4	.61	.79
9. Comfortable with faculty	4.2 (0.9)	42.8	0.7	.69	.75

[a]EXTCONN Subscale Mean = 16.3 (*SD* = 2.9); *Median* = 16.0; *Mode* = 16.0 (smallest of multiple modes); Range = 4–20; Alpha = .82

Table 9 contains the item statistics for the Institutional (INST) facilitators domain. The four-item subscale had a mean of 9.5 (*SD* 4.4), with a median of 9.0, a mode of 4, and a range of 4–20, all of which indicated some variability in responses. Inter-item correlations for the INST domain ranged from .40 to .64, indicating sufficient relatedness. The inter-item correlation mean was .53. All of the four items exceeded the hypothesized 10% or less for floor effects, indicating that many respondents did not experience these Institutional facilitators. The highest floor effect was noted for Gender communication skills taught (47.6%), followed by Gender caring difference taught (43.4%), and SON recruited men (37.9%); the lowest floor effect was for SON marketed to men (17.9%), which still exceeded the hypothesized 10% or less. Three out of four Institutional domain items exceeded the hypothesized 10% threshold for ceiling effects. Only 6.2% of respondents reported experiencing Gender communication skills taught to a great amount. None of the highest ceiling effects exceeded 13.1% (SON marketed to men*).* Gender caring difference taught had the next highest ceiling effect at 11.7%, followed by SON recruited men (11.0%), both of which exceeded the hypothesized 10% or less. All corrected item-to-total correlations ranged between .58 to .68, meeting retention criteria of between .50 to .80 for corrected item-to-total correlations. The INST subscale had a Cronbach alpha of .82. The four *alpha if deleted* items ranged from .75 to .80, indicating that no individual item deletions would improve the domain's Cronbach alpha.

Table 9

Item Statistics for the Institutional (INST) Facilitators Domain

INST Item Response to "I experienced this"	Mean (*SD*)[a]	% Ceiling "Great amount"	% Floor "Did not"	Corrected Item-to-total Correlation	Alpha if Deleted
2. Gender communication skills taught	2.1 (1.3)	6.2	47.6	.64	.77
4. SON marketed to men	2.8 (1.3)	13.1	17.9	.58	.80
6. SON recruited men	2.3 (1.4)	11.0	37.9	.68	.75
13. Gender caring difference taught	2.3 (1.5)	11.7	43.4	.66	.76

[a]INST Subscale Mean = 9.5 (*SD* = 2.9); *Median* = 9.0; *Mode* = 4.0; Range = 4–20; Alpha = .82.

In conclusion, Hypothesis 2b was partially met. Tables 5 through 9 trace the development of SFM items through the item analysis process. Table 5 began with the 37-item SFM that was developed through content expert input and content validity procedures, and Table 6 presented the 13-item SFM, after 24 items were removed due to excessively high floor and/or ceiling effects, a corrected item-to-total correlation less than 0.3, low average inter-item correlations, consideration of the alpha if item deleted, or a combination of these criteria in the order specified by Ferketich (1991). Tables 7 through 9 present information regarding the three domains of the 13-item SFM: Internal facilitators, External Connections facilitators, and Institutional facilitators. The individual items demonstrated good variability in relation to the means, although 4 of 13 (31%) items exceeded the 10% floor effects, and 12 of 13 (92%) items exceeded the 10% ceiling effects hypothesized in this research. In this sample, data suggest that respondents experienced greater levels of Internal and External Connections facilitators, and lesser levels of Institutional facilitators. All inter-item correlation means were at least .47, and all item-to-total correlations were at least .43 for the 13-item SFM and all three domains.

Hypothesis 2c. The survey and potential domains have evidence of internal consistency reliability with Cronbach alphas greater than or equal to .70 among men in nursing (DeVellis, 2003).

Hypothesis 2c was met, as noted in Tables 6 through 9. The three domains and the overall SFM 13-item scale had Cronbach alphas ranging from .81 to .85, supporting internal consistency reliability in this sample (DeVellis, 2003).

Hypothesis 2d. The survey and potential domains have evidence of two-week test-retest reliability with an intra-class correlation coefficient greater than .60 among men in nursing (Shrout & Fleiss, 1979).

Hypothesis 2d was partially met, as demonstrated in Table 10. The SFM was administered to 53 willing respondents at a minimum of two weeks after initial survey response, although a few respondents returned surveys up to seven weeks after the initial response. Only 10 (19%) of respondents returned survey retakes at three weeks or less. The SFM 13-item instrument and two out of three domains had Intraclass Correlation Coefficients ranging from .65 to .72. The EXTCONN domain had an ICC of .57, slightly less than the hypothesized .60 or greater but still within the 95% CI. The SFM 13-item ICC was .72, indicating substantial stability over time.

Table 10

Two-week Test-retest Intraclass Correlation Coefficients (ICC)

Scale/subscale	No. of Items	ICC	Cronbach alpha
SFM	13	.72 (95% CI = .57–.83)	.84
Internal (INT)	5	.68 (95% CI = .50–.80)	.81
External Connections (EXTCONN)	4	.57 (95% CI = .36–.73)	.73
Institutional (INST)	4	.65 (95% CI = .47–.78)	.80

Hypothesis 2e. The survey has evidence of construct validity with factor loadings of .32 and above for the scale or each domain as determined through factor analysis among men in nursing (Tabachnik & Fidell, 2007).

Hypothesis 2e was met. The KMO measure of sampling adequacy was ascertained for the 37-item SFM prior to beginning factor analysis; the obtained value of .82 indicated suitability for factor analysis because it exceeded the .60 threshold suggested by Tabachnick & Fidell (2007). Bartlett's Test of Sphericity also was examined at this time and found to be significant at .000, indicating appropriateness for the use of factor analysis (Tabachnick & Fidell, 2007).

Table 5 contains the factor loadings for the 37-item SFM, developed through the content expert input and content validity procedures. The individual item means ranged from 1.6 (Men's role in nursing history taught) to a five-item tie for the mean of 4.5 (Graduation was a step to my goals, I was assigned male and female patients, I was assigned all types of patients, I received positive patient feedback, and I was comfortable interacting with males). The 37-item individual mean was 3.6, somewhat close to the natural midpoint of 3. Standard deviations demonstrated good variability, ranging from 0.7 to 1.8. The majority of items ranged from 1 to 5, but seven items had a 2 to 5 range, indicating that all of the respondents in this sample experienced the following, at least to some degree: Patients' acceptance and respect, Ease interacting with females, Being assigned both male and female patients, Being assigned all types of patients, RN is an interesting life, Confident in RN decision, and Had positive patient feedback. Many of the SFM items had satisfactory correlations between .30 and .70, however, four items had no acceptable correlations (Keeping social life separate from professional life, Had grad school plan, Had prior patient care experience, and Friends and family are RNs). Two items had a correlation that exceeded .70: RN is interesting life and RN is exciting life correlated at .73. This correlation was examined more closely, as previously described. Additionally, almost one-quarter (24%) of the 37 SFM items failed to meet the specified item-to-total correlation threshold. Nevertheless, all of the SFM 37 items contained in Table 4 were retained for initial exploratory factor analysis, despite not necessarily meeting specified criteria, in order to help clarify possible dimensionality of the instrument.

The initial factor loadings for the 37-item SFM are displayed in Table 5. Thirty percent of these possible items did not have loadings within the .40 to .90 grouping recommended by Netemeyer et al. (2003), although each item considered for deletion was inspected for important face or content validity. Initial exploratory factor analysis

findings were utilized in conjunction with item analysis results when determining which items from the 37-item SFM were the best candidates for retention or deletion.

Exploratory factor analysis with Varimax rotation was utilized to examine the dimensionality of the 37-item SFM, guided by Netemeyer et al. (2003). Consideration of initial Eigenvalues resulted in 10 factors over the value of 1, explaining 64.9% of variance. Examination of the scree plot supported the use of 3 factors, which accounted for 39.3% of variance. The three highest Eigenvalues were for Factor I: 8.5 with 23% of variance; Factor II: 3.7 with 9.9% of variance; and Factor III: 2.4 with 6.4% of variance. Seven additional Eigenvalues were over 1 but were not supported by the scree plot, did not represent at least 5% of the total variance as suggested by Hair, Anderson, Tatham, and Black (1998) and cited in Netemeyer et al. (2003), and contained only one or two important loadings. Conceptually, the SFM was envisioned as containing three facilitator domains, so use of the three-factor solution was strongly considered.

Table 11 contains the 13 SFM items that remained after item analysis and initial factor analysis. Item eliminations were based on consideration of inter-item correlations, initial item-total and corrected item-total correlations, and the results of exploratory factor analysis. Three of the 37 SFM items had loadings of .35 or greater on all three factors; these were examined according to potential domain and highest-scoring factor. One of these items (RN goal) was retained in the internal (INT) facilitator domain; the two other items (Graduation is goal and I was assigned all types of patients) were deleted due to the combined results of factor analysis and item analysis. Item eliminations resulted in the 13-item SFM instrument with three domains: Internal facilitators (INT) with five items; External Connections facilitators (EXTCONN) with four items; and Institutional facilitators (INST) with four items.

Table 11

*Rotated Factor Matrix for the 13-item SFM scale (*n = *145)*

SFM Item Response to "I experienced this"	Factor 1[a] (Internal)	Factor II[b] (External Connections)	Factor III[c] (Institutional)
1. Positive friend feedback	.55		
2. Gender communication skills taught			.76
3. Caring faculty		.69	
4. SON marketed to men			.60
5. Had goal of RN	.83		
6. SON recruited men			.72
7. Faculty available to meet		.68	
8. Instructors OK with men		.58	
9. Comfortable with faculty		.75	
10. RN is exciting life	.65		
11. RN is interesting life	.64		
12. Confident in RN decision	.58		
13. Gender caring difference taught			.72

[a]Factor I Eigenvalue = 2.36, 18.1% of variance. [b]Factor II Eigenvalue = 2.31, 17.8% of variance. [c]Factor III Eigenvalue = 2.30, 17.7% of variance.

As indicated by the Rotated Factor Matrix for the 13-item SFM (Table 11), the 13-item SFM scale contained three factors: the Internal facilitators (INT), the External Connections facilitators (EXTCONN), and the Institutional facilitators (INST). Internal facilitators (Factor I) had factor loadings ranging from .55 to .83 and accounted for 18% of variance. External Connections facilitators (Factor II) had factor loadings of .58 to .69, accounting for almost 18% of variance. Institutional facilitators (Factor III) contained factor loadings from .60 to .76, and accounted for about 18% of variance. The three factors together accounted for about 54% of total variance.

Because use of a summed total for the 13-item SFM was anticipated, the factor analysis process was repeated with the 13 items of the SFM, specifying a one-factor solution, as suggested by Netemeyer et al. (2003). Factor loadings for the 13 items ranged from .48 to .72, supporting the use of an SFM summed total. Therefore,

Hypothesis 2e was met through the descriptions of support for construct validity, including support for dimensionality and evidence of reliability (Netemeyer et al., 2003), as previously discussed.

Hypothesis 2f. To support criterion-related validity, the SFM and potential domains are significantly correlated with the PIL among men during nursing education.

Hypothesis 2f was partially met. The *Pearson product moment correlation* was examined for the 13-item SFM total and potential domains and for the PIL among men in nursing. The 13-item SFM total was significantly and positively correlated (r = .19, p = .02) with the PIL. The INT domain was highly significantly and positively correlated with the PIL (r = .27, p = .001), although the PIL was not correlated with the EXTCONN (r = .15, p = .08) or the INST (r = .06, p = .46) domains. The significant correlations of the PIL with both the SFM 13-item total and the INT domain upheld an empirical association between the PIL and the SFM (DeVellis, 2003) and therefore provided partial support for criterion validity.

Specific Aim 3. To determine the combination of independent variables that explains a significant amount of variance in: (a) Purpose in life, (b) GPA, (c) NCLEX attempts, and (d) Perceived nursing success in male nursing students using a theoretically based conceptual model to provide further evidence of construct validity for the SFM.

Screening for potentially important variables from among demographic characteristics occurred prior to regressions explaining variance in the outcomes of Purpose in life, GPA, NCLEX attempts, and Perceived nursing success. Pearson r was utilized to screen for possible continuous variables, while Independent Sample t tests were used to screen potential discrete variables. Results from these screening procedures were utilized to select relevant independent variables to be entered into the multiple regressions using a significance level of $p < .05$.

Table 12 contains the results for screening of the continuous demographic characteristics (age, age at BSN, total military service years, and total means of financial support) for potential use in regressions explaining variance in (a) Purpose in life, (b) GPA, (c) NCLEX attempts, and (d) Nursing success using the Pearson's correlation coefficient *r*. Respondent's age was found to correlate significantly with nursing success, with older participants reporting higher success ($r = .18$, $p < .05$). Age at BSN was found to significantly correlate with GPA ($r = .20$, $p < .05$), with older students having higher GPAs. These variables were included in the regressions for Nursing success and GPA.

Table 12

Screening for continuous demographic characteristics for potential use in regression predicting purpose in life using Pearson r

Independent Variables	Purpose in Life	GPA	NCLEX Attempts	Nursing Success
Age[a]	.15	-.06	.02	.18*
Age at BSN[a]	-.09	.20*	<.01	-.08
Military Service Years	.12	-.12	.09	.16
Financial Support Total	-.08	.06	-.07	-.06

[a]Variables with significant findings. *$p \leq .05$.

Table 13 contains results of screening of discrete characteristics (marital status, children, race, sexual preference, military status, current degree, income level, and birth order) for potential use in regressions explaining variance in (a) Purpose in life, (b) GPA, (c) NCLEX attempts, and (d) Nursing success, using Independent Sample *t* tests.

As depicted in Table 13, some of the independent variables were found to be significantly associated with Purpose in life, GPA, Nursing success, and/or NCLEX attempts. Dummy-coding was used to examine certain variables more closely. Marital status, birth order, current degree, and income level were dummy-coded for closer inspection according to procedures in Tabachnick and Fidell (2007). Eventually, marital status, race, sexual preference, and income were collapsed into two categories due to

small group sizes. Levene's Test for Equality of Variances was closely examined and utilized as appropriate in analyses because some groups were quite small and homogeneity or equality of variances was an assumption for *t* tests (Field, 2005); the statistics for "Equal variances not assumed" were used as indicated.

In this sample, some outcomes differed with respect to *marital status*. Married nurses generally rated themselves more highly in nursing success [M = 9.6, SE = .13, $t(10) = 2.32$, p = .02]. *Having children* increased the perception of nursing success of respondents [M = 9.7, SE = .12, $t(95) = 2.62$, p = .01]. *Sexual preference* was found to impact GPA. Those who considered themselves as *not heterosexual* or *preferred not to disclose* had significantly higher GPAs ([M = 3.7, S = .09, $t(124) = 2.17$, p = .01]. Neither race nor ethnicity significantly impacted GPA in this sample; however, there were few non-Caucasian (n = 11) individuals for comparison.

Analyses of *current degree* had significant findings. Respondents holding an MSN considered themselves significantly more successful as nurses [M = 9.8, SE = .13, $t(141) = -2.95$, p = .00]. Nurses holding either a DNP [M = 1.0, SE = .00, $t(126) = 4.18$, p = .00] or a PhD [M = 1.0, SE = .00, $t(126) = 4.18$, p = .00] were significantly more likely to have only taken NCLEX once. In terms of *income*, those who said they had a comfortable income scored significantly higher on purpose in life [M = 86.5, SE = .66, $t(143) = 2.68$, p = .01], rated themselves more highly in nursing success [M = 9.7, SE = .10, $t(29) = 2.92$, p = .01], and were more likely to have only taken NCLEX once [M = 1.2, SE = .05, $t(97) = 2.48$, p = .02]. In this sample, the birth order of respondents displayed some differences among the means that were evaluated with ANOVAs, but none were statistically significant. All variables with a significance level of 0.5 or less (marital status, children, sexual preference, current degree, income level) were entered into the appropriate regressions.

Table 13

Screening for Discrete Characteristics for Regression for Predicting Purpose in life, GPA, Nursing Success, and NCLEX Attempts Using Independent Sample t *Tests and ANOVA*

Demographics[a]	Mean/SE	*t*(df)	Mean/SE	*t*(df)	Mean/SE	*t*(df)	Mean/SE	*t*(df)
Marital status								
Married (*n* = 90)	86.31/.83	1.88(142)	3.50/.04	1.30(124)	1.13/.05	.91(125)	9.64/.13	2.29[b]*(140)
All else (*n* = 54)	83.58/1.26		3.57/.05		1.21/.07		9.07/.23	
Children								
Yes (*n* = 80)	85.96/.76	1.17(104)	3.54/.04	.26(124)	1.15/.05	.25(124)	9.71/.12	2.62[b]*(95)
No (*n* = 63)	84.23/1.27		3.52/.04		1.17/.06		9.05/.22	
Race								
Caucasian (*n* = 126)	85.08/.76	.26(139)	3.56/.03	1.97(121)	1.16/.05	.1(122)	9.33/.13	1.0(137)
All else (*n* = 15)	85.68/2.25		3.38/.10		1.17/.11		9.73/.27	
Ethnicity								
Hispanic (*n* = 7)	81.75/3.51	1.12(139)	3.45/.15	.54(122)	1.14/.14	.06(123)	9.71/.36	.60(137)
All else (*n* = 134)	85.43/.73		3.52/.03		1.15/.04		9.38/.13	
Sexual Preference								
Heterosexual (*n* = 120)	85.05/.76	.93(141)	3.50/2.16	2.16[b]*(124)	1.15/.04	.57(124)	9.36/.14	1.04(139)
All else (*n* = 23)	86.83/1.76		3.67/.09		1.21/.12		9.70/.26	
Military Service								
Yes (*n* = 40)	86.45/1.17	1.06(142)	3.51/.16	.25(125)	1.24/.09	1.35(49)	9.77/.19	1.86(140)
No (*n* = 104)	84.78/.86		3.53/.03		1.13/.04		9.27/.15	

Table continues

Degree								
MSN Yes (*n* = 62)	86.58/.92	1.6(143)	3.55/.04	.61(125)	1.17/.05	.30	9.82/.13	2.95[b]**(141)
MSN No (*n* = 83)	84.36/1.01		3.51/.04		1.15/.05		9.12/.18	
PhD Yes (*n* = 7)	85.14/2.86	.05(143)	3.53/.13	.01(125)	1.0/0	4.18[b]***(121)	9.71/.12	.56(141)
PhD No (*n* = 138)	85.31/.72		3.53/.03		1.16/.04		9.40/.57	
DNP Yes (*n* = 7)	87.86/2.90	.82(143)	3.54/.19	.08(125)	1.0/0	4.18[b]***(120)	10.43/.30	1.92(141)
DNP No (*n* = 138)	85.18/.72		3.53/.03		1.17/.04		9.37/.12	
Income Level								
Comfortable (*n* = 117)	86.47/.66	2.68[b]**(32)	3.52/.03	.54(125)	1.18/.05	2.48[b]*(97)	9.66/.10	2.92[b]**(29)
Just enough or not enough (*n* = 28)	80.43/2.15		3.56/.05		1.04/.04		8.41/.41	
Birth Order		$F(df_b,df_w)$[b]		$F(df_b,df_w)$[b]		$F(df_b,df_w)$[b]		$F(df_b,df_w)$[b]
First (*n* = 43)	83.93/1.55	1.23(3,140)	3.56/.05	.95(3,122)	1.11/.05	.78(3,123)	9.13/.30	.91(3,138)
Middle (*n* = 29)	86.46/1.39		3.43/.06		1.17/.10		9.59/.19	
Last (*n* = 55)	86.49/.96		3.54/.05		1.22/.07		9.59/.16	
Only (*n* = 17)	83.34/2.19		3.55/.08		1.07/.07		9.35/.32	

[a]Independent Variables: Purpose in life; GPA; NCLEX attempts; Nursing success. [b]Independent variables with significant findings. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Hypothesis 3a. Characteristics of male nursing students, Internal factors, External Connections factors (within family, friends, and nursing program), and Institutional factors explain a significant amount of variance in male nursing students' purpose in life upon baccalaureate graduation.

Hypothesis 3a was partially met through the results of multiple regression explaining a modest amount of variance in purpose in life. The statistically significant independent variable was income level/comfortable [$t(1, 32) = 2.68$, $p = .01$]; the three SFM domains (Internal facilitators, External Connections facilitators, and Institutional facilitator factors) were included in the regression.

Data were inspected for normality, linearity, and homoscedasticity of residuals prior to regressions analyses, as outlined in Tabachnick and Fidell (2007). No outliers were identified, and although several variables had variance proportions exceeding .50, none of these had condition indices greater than 30 or tolerances less than .20; therefore, multicollinearity and singularity were not concerns (Tabachnick & Fidell, 2007). Consequently, the significant independent variable for purpose in life, income level/comfortable, was entered into the regression equation (Table 14).

Table 14

*Multiple Regression Predicting Purpose in Life (*n = *145)*

Independent Variable	*B*	*Beta*	*T*	*p*	*r*	Unique r^2
Constant	61.61		12.74	.00		
Income/Comfortable	6.55	.31	3.92***	.000	.28	.09
Internal facilitators	.76	.29	3.33***	.001	.27	.07
External Connections facilitators	.01	.01	.05	.96	.15	.00
Institutional facilitators	.00	.00	.01	.99	.06	.00

Note. $R = .41$; $R^2 = .17$; Adjusted $R^2 = .14$; R^2 Change = .17; F Change (4,140) = 6.99***.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

These four independent variables accounted for 17% of the variance (14% adjusted) in purpose in life. The only significant independent variables that were useful for predicting purpose in life in this sample were a comfortable income level and the Internal facilitators domain total. Respondents with a comfortable income level and/or those who scored more highly on the Internal facilitators domain of the SFM also scored significantly higher on purpose in life.

Hypothesis 3b. Characteristics of male nursing students, Internal factors, External Connections factors (within family, friends, and nursing program), Institutional factors, and purpose in life explain a significant amount of variance in male nursing students' GPA upon baccalaureate graduation.

Hypothesis 3b was partially met through the results of multiple regression explaining a modest amount of variance in GPA that may be associated with many factors, some of which are included in Tables 12 and 13. Demographic characteristics, as well as the extent to which facilitating Internal, External Connections, and Institutional factors are present, may assist in explaining variance in GPA. Multiple regression was conducted to examine the impact of demographic characteristics on the variance in GPA.

No outliers were identified through examination of data, and although four variables had variance proportions exceeding .50, none of these had condition indices greater than 30 or tolerances less than .20, which indicated that multicollinearity and singularity were not concerns (Tabachnick & Fidell, 2007).

One significant independent variable for GPA was identified through Pearson *r*—age at BSN ($r = .20$, $p = .03$, $N = 122$). Military service years was considered but was non-significant after recoding. The significant independent variable identified through Independent Sample *t* test was sexual preference [$t(1, 124) = 2.16$*]. These variables were entered into the regression equation (Table 15).

Table 15

*Multiple Regression Predicting GPA (*n = *121)*

Independent Variable	*B*	*Beta*	*T*	*p*	*r*	Unique r^2
Constant	3.33		8.76	.00		
Age at BSN	.01	.21	2.21*	.03	.20	.04
Sexual Preference/ heterosexual	-.15	-.17	-1.88	.06	-.21	.03
Internal facilitators	.00	.01	.12	.90	-.01	.00
External Connections facilitators	.03	. 26	2.46*	.02	.18	.04
Institutional facilitators	.00	-.05	-.50	.62	.00	.00
Purpose in Life	.00	-.10	-1.09	.28	-.09	.01

Note. R = .36; R^2 = .13; Adjusted R^2 = .09; R^2 Change = .13; F Change (6,114) = 2.88**. *$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

The independent variables accounted for 13% of variance (9% adjusted) in GPA; however, age at BSN and External Connections facilitator domain scores emerged as significant independent predictors. In other words, older students achieving their BSN and those with greater levels of External Connections facilitators tended to have significantly higher GPAs.

Hypothesis 3c. Characteristics of male nursing students, Internal factors, External Connections factors (within family, friends, and nursing program), Institutional factors, and purpose in life will explain a significant amount of variance in respondents' self-reported level of nursing success.

Hypothesis 3c was partially met through the results of multiple regression explaining a moderate amount of variance in respondents' self-reported level of nursing success.

Data were inspected for normality, linearity, and homoscedasticity of residuals prior to regressions analyses, as outlined in Tabachnick and Fidell (2007). One case

was identified as a possible outlier, but after verification of data accuracy and consideration of Mahalanobis' and Cook's distances, as well as running regression with and without the case, the decision was made to retain the case in the interests of accurately representing the sample. Variance proportions, condition indices, and tolerances were acceptable, indicating that multicollinearity and singularity were not concerns (Tabachnick & Fidell, 2007).

The only continuous demographic characteristic important to Nursing Success that was identified through Pearson *r* was age (r = .18, p = .03, B = 141). Significant independent variables identified through Independent Sample *t* tests were marital status [$t(1, 141) = 2.31$, p = .02], children [$t(1, 139) = 2.62$, p = .01], current degree/Masters [$t(1, 141) = -2.95$, p = <.01], and income level/comfortable [$t(1, 29) = 2.92$, p = <.01]. These variables were entered into the regression equation (Table 16).

Table 16

*Multiple Regression Predicting Nursing Success (*n = *138)*

Independent Variable	*B*	*Beta*	*t*	*p*	*r*	Unique r^2
Constant	.20		.19	.85		
Age	-.001	-.03	-.34	.74	.19	.00
Children	.50	.17	1.95*	.05	.23	.01
Marital status/ married	-.18	-.06	-.71	.48	.18	.00
Degree/MSN	.46	. 16	2.24*	.03	.26	.02
Income/ comfortable	.58	.15	2.22*	.03	.34	.02
Purpose in life	-.01	.57	8.01***	.00	.64	.26
Internal factors	-.01	-.02	-.24	.81	.13	.00
External Connections factors	-.02	.04	.50	.62	.11	.00
Institutional factors	.01	.04	.50	.62	.00	.00

Note. R = .70; R^2 = .49; Adjusted R^2 = .45; R^2 Change = .49; F Change (9,128) = 13.42***.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

The independent variables accounted for 49% of variance (45% adjusted) in respondents' self-reported level of nursing success. Four significant independent predictors of nursing success emerged: the first was having children. Nurses with children considered themselves significantly more successful. The second predictor was the acquisition of an MSN degree. In this sample, nurses holding an MSN rated themselves as significantly more successful in their professional lives. The third predictor was income; those nurses with a comfortable income considered themselves as significantly more successful. The fourth and most highly significant predictor for nursing success was purpose in life; men in nursing who had a greater sense of purpose in their lives rated themselves as significantly more successful in their professions than those with lower purpose in life scores. Generally speaking, men in nursing holding an MSN and having a comfortable income, children, and/or a higher sense of purpose in life evaluated themselves as being more highly successful than others.

Hypothesis 3d. Characteristics of male nursing students, Internal factors, External Connections factors (within family, friends, and nursing program), Institutional factors, and purpose in life explain a significant amount of variance in respondents' self-reported level of NCLEX attempts.

Hypothesis 3d was not addressed due to insufficient variability in NCLEX attempts as a dependent variable. In this sample, 111 (77%) participants passed NCLEX on the first attempt; 14 (10%) passed on the second attempt; 3 (2%) passed on the third attempt; and 17 (12%) chose not to answer the question. The high number of missing responses, coupled with insufficient number of cases in the two or three attempts categories, resulted in insufficient power (Munro, 2005) to evaluate NCLEX attempts as a dependent variable using either logistic or multiple regression.

In conclusion, Specific Aims 1, 2, and 3 were either partially or fully met. Comments from a preliminary survey of men in nursing (Specific Aim 1) were

incorporated into the SFM during nursing education. The psychometric properties of the SFM were evaluated through content expert review and revision, item analysis and deletion, factor analysis, and assessment of reliability and validity (Specific Aim 2). The final result was the 13-item SFM instrument that supported evidence of both construct and criterion-related validity, as well as internal consistency and test-retest reliability. Finally, further evidence of construct validity was provided through the determination of the combination of independent variables that explained success in men in nursing. After screening for significant demographic and associated independent variables, multiple regressions were conducted for the dependent variables of purpose in life, GPA at BSN graduation, and perceived nursing success, guided by the conceptual model.

Regarding purpose in life: comfortable income level, Internal facilitators, External Connections facilitators, and Institutional facilitators accounted for 17% of the variance (14% adjusted) in purpose in life; the model was very highly significant ($p \leq .000$). However, the only individual independent variables explaining a greatly significant amount of variance in purpose in life in this sample were a comfortable income and the Internal Facilitators domain total ($p \leq .000$).

Regarding GPA at BSN graduation: age at BSN, sexual preference/heterosexual, Internal facilitators, External Connections facilitators, Institutional facilitators, and purpose in life together accounted for 13% of variance (9% adjusted) in GPA. The model was highly significant ($p \leq .01$). Age at BSN and External Connections facilitators emerged as significant individual independent variables in the model ($p < .05$).

For nursing success, the model included age, children, marital status, comfortable income, MSN degree, purpose in life, and the three facilitator domains. The model accounted for 49% of variance (45% adjusted) in nursing success and was very highly significant at $p \leq .001$. The significant individual independent variables were having children, holding an MSN, a comfortable income, and a higher sense of purpose

in life. In terms of nursing success, men in nursing holding an MSN and having a comfortable income, children, and a greater sense of purpose in life considered themselves significantly more professionally successful.

Further evidence of construct validity for the SFM was provided through the identification of independent variables that explained significant variance in purpose in life, GPA, and perceived nursing success for men in nursing as guided by the theoretically based conceptual model. The development and use of the psychometrically tested SFM was supported in order to assist in quantifying the previously undefined construct of facilitators for men during nursing education.

CHAPTER 5. DISCUSSION

The purpose of this research was to examine facilitators for men during nursing education. The research detailed the development and psychometric testing of the SFM during nursing education. This chapter begins with a discussion of the findings, followed by theoretical and practice implications. Potential future research directions are suggested, and the chapter closes with final conclusions.

Specific Aims and Hypotheses

Specific Aims 1 and 2 regarding the development and psychometric testing of the SFM were supported, as qualitative comments from a preliminary survey were evaluated for survey inclusion in the SFM, resulting in 10 items being incorporated into the 37-item SFM. Content experts reviewed proposed items and suggested revisions. Several experts noted that multiple items were common to both male and female experiences and, therefore, not appropriate for the survey. This seemed to contradict Smith's (2006) findings on the most important male nursing student challenges, most of which applied to both genders, such as balancing family responsibilities with schoolwork or paying for tuition and books. Nine of the 10 items added from the preliminary survey were eventually deleted because of low item-to-item or item-to-total correlations or poor response variability. Although the comments raised excellent points, they seemed more representative of individual respondent experiences rather than the experiences of most men in nursing, which supported O'Lynn's assertion that much of the research on men in nursing consisted of "qualitative studies, reviews and anecdotal reports" (2007, p. 174). This paucity of quantitative research supported the need for rigorous development and psychometric testing of the SFM instrument.

Comments from content experts resulted in the creation of a fourth facilitator domain. The domain of External Connections facilitators was expanded to External Family and Friends, and External Nursing Program Connections, in order to differentiate

between external levels of support; Internal facilitators and Institutional facilitators remained unchanged. After the item and factor analyses, only one External Family and Friends item remained; furthermore, it loaded into the Internal Facilitator domain. Therefore, the two existing External facilitator domains were collapsed into one External Connections domain, which better represented the support men in nursing received from Interpersonal connections they developed within their nursing programs. The External Connections domain was especially important in order to examine the "lack of role models and isolation" posited as a significant barrier for men by O'Lynn and Tranbarger (2007, p. 174) and others (Meadus & Twomey, 2007; Roth & Coleman, 2008; Stott, 2007).

The SFM Institutional domain addressed facilitators for most of the other barriers listed by O'Lynn (2007): the feminine paradigm of nursing education, the gender-based language and communication styles, different treatment for men, and issues related to touch and caring. These Institutional barriers have been detailed by several researchers (Anthony, 2006; LaRocco, 2006; Meadus, 2000; Stott, 2007); facilitators, although untested and primarily anecdotal, focused on specific actions that could be taken by faculty and/or schools of nursing. Recommendations included increased use of simulation (Grady et al., 2008), increased support for students experiencing academic or personal stress (Bouden, 2008), and improved convenience for support services (Smith, 2006).

New to the literature for men in nursing was the examination of Internal facilitators, including the concept of purpose in life. Internal facilitators conceptually were defined as the intrapersonal experiences, strengths, and motivators that individuals brought to nursing. While several researchers have written about the *desire to help people and make a real difference in someone's life* as chief motivators (Anthony, 2006; Ellis et al., 2006; Kleinman, 2004; LaRocco, 2006; Meadus & Twomey, 2007; Okrainec,

1994; Villeneuve, 1994), little is known about the roles that work or life experiences play, or what strengthens men to continue to study nursing when difficulties occur. These knowledge gaps were partially addressed through assessment of the SFM Internal facilitators and demographic information, in conjunction with the PIL instrument (Crumbaugh & Maholick, 1964).

Also important to psychometric testing were the quality of item distributions, Internal consistency reliability, test-retest reliability, and construct validity using factor analysis. Although individual items demonstrated good variability, many floor and ceiling effects greatly exceeded the hypothesized 10%. Positive findings drawn from high ceiling effects indicated that many respondents experienced the following to a great amount: a plan for graduate school, being assigned male and female patients under a variety of conditions, patient acceptance, respect and positive feedback, recognition of the need to keep social life separate from work, and the view of nursing as more than a job. For the most part, these frequently experienced items were reflected in the literature, with the exception of the need to keep social life separate from work. This particular item made enough practical sense that most respondents agreed with it. This research also supported the idea that having a solid career plan, usually including graduate school, seemed to be a gender-related difference in motivation to study nursing, as posited by Ellis et al. (2006), Kleinman (2004), LaRocco (2006), Okrainec (1994), Stott (2007), and Villeneuve (1994). The fact that most respondents reported being assigned both male and female patients under a variety of conditions contradicted the widely held perception that men were more often assigned to care for other men or for physically demanding patients, or useful for doing the heavy lifting (Anthony, 2006; Brady & Sherrod, 2003; Keogh & O'Lynn, 2007). The finding that many men experienced positive feedback and respect from patients was gratifying as this has been noted by men as one of the few positive experiences from nursing school (Ellis et al., 2006).

Several important areas for improvement can be concluded from an examination of the high floor effects. A high or large floor effect indicated that many respondents did not experience the following: instruction regarding men's role in nursing history, male support group opportunities, the chance to observe male nurse mentors model masculine nursing behaviors, and instruction about gendered differences in communication and caring behaviors. Interestingly, the very low scores in these areas corresponded closely with O'Lynn's (2004) barriers for men in nursing education. Because 37% of SFM respondents were 32 years of age or less, indicating that most were probably within 10 years of BSN graduation, one might conclude that many of O'Lynn's most important findings were not well-incorporated into the nursing education of this sample group. This supposition was reinforced in discussions regarding the need to provide male students with male role-modeling or mentorship opportunities (Meadus & Twomey, 2011; Roth & Coleman, 2008; Stott, 2007), and the critical importance of educating faculty on gendered communication styles as well as male history and role models in nursing (Meadus & Twomey, 2011).

Almost one-third of the original 37 items in the SFM were deleted due to insufficient item-to-total correlations, which were important in guiding deliberations on scale length in view of the desire for both reliability and avoidance of respondent fatigue (DeVellis, 2003). Several of the items that were deleted in this part of the process were surprising because they have been highlighted in the literature. For example, neither having male faculty nor viewing nursing care being delivered by a male RN had item-to-total correlations sufficiently high enough to retain the items, which seemed to indicate somewhat less support in this sample for findings from Brady and Sherrod (2003), Ellis et al. (2006), and Keogh and O'Lynn (2007). Having prior patient care experience also had a low item-to-total correlation that resulted in item deletion, although

Ellis et al. (2006) mentioned this as one way in which men may become aware of nursing as a potential occupation.

To summarize, the SFM began as a 37-item instrument, developed through content expert input and content validity procedures. Twenty-four items were removed due to excessively high floor and/or ceiling effects, low item-to-total or inter-item correlations, and considerations of the alpha if items were deleted. The resulting 13-item SFM contained three domains: Internal facilitators, External Connections facilitators, and Institutional facilitators. In this sample, respondents experienced greater amounts of Internal facilitators (*Mean* = 21.3) and External Connections facilitators (*Mean* = 16.3), and lesser amounts of Institutional facilitators (*Mean* = 9.5). The fact that these respondents reported greater amounts of Internal facilitators and External Connections facilitators, and lesser amounts of Institutional facilitators was noteworthy as Institutional facilitators have been much more heavily represented in the literature than either Internal facilitators or External Connections facilitators.

The Internal facilitators domain addressed the desire for an exciting and interesting professional life (Anthony, 2006; Kleinman, 2004; LaRocco, 2006; Meadus & Twomey, 2007). This domain also emphasized the strength of a nursing goal (Ierardi, Fitzgerald, & Holland, 2010), individual confidence in that decision (Meadus & Twomey, 2011), and the importance of positive feedback from meaningful people (O'Lynn, 2004).

The External Connections facilitators domain focused on the relationships students had with faculty and instructors. Faculty played a key role in the acceptance that men perceived and valued, by being accessible and comfortable to talk with, as well as by ensuring that men had opportunities for peer support (Roth & Coleman, 2008), both socially and through clinical placements in groups with other men (Brady & Sherrod, 2003). The importance of clinical instruction and positive feedback from instructors (Ierardi et al., 2010; Meadus & Twomey, 2011) was pivotal. Making friends

and receiving positive patient feedback (Ellis et al., 2006) were noted as important in the literature but failed to meet the criteria for item and factor analyses; these items may have been considered important to individual respondents (Ellis et al. [2006] interviewed 13 male students) but less important generally as External Connections facilitators, especially when compared with the relationships of students to their clinical instructors or faculty. Overall, Okrainec (1994) noted that most men (about 70%) were satisfied with their nursing education, and they were most satisfied with their relationships with instructors and peers.

The Institutional facilitators domain focused on four facilitators that were well-represented in the literature although not often experienced by respondents. Individuals would be more likely to notice the lack of intentional marketing to or recruitment of men into nursing programs (Ierardi et al., 2010; Kleinman, 2004; MacWilliams, Schmidt, & Bleich, 2013; Meadus, 2000; Meadus & Twomey, 2007; Meadus & Twomey, 2011; O'Lynn, 2004; Villeneuve, 1994; Whittock & Leonard, 2003). Students would be more aware of not receiving instruction on gendered differences in caring behaviors (Anthony, 2006; Fisher, 2009; Grady et al., 2008) and on communication styles (Ellis et al., 2006; MacWilliams et al., 2013; Meadus & Twomey, 2011; Roth & Coleman, 2008; Stott, 2007; Streubert, 1994). If there were large-scale institutional efforts in any of these areas, they might not be publicized, recognized, or even closely adhered to by individual faculty. For cost-conscious universities involved in rigorous evaluation of outcomes, setting a priority for male recruitment into nursing or utilizing additional faculty development resources to address gendered differences in caring behaviors or communications may have been problematic or cost-prohibitive, especially because these activities were not legally mandated initiatives.

The lack of a reliable and valid instrument that was useful for examining facilitators for men during nursing education has been challenging. Although six

quantitative instruments were located that addressed facilitators or barriers for men in nursing (Keogh & O'Lynn, 2007; Meadus & Twomey, 2007; Okrainec, 1994; O'Lynn, 2004; Romen & Anson, 2005; Smith, 2006), none of these specifically targeted facilitators for men in nursing education or provided evidence of thorough psychometric testing. In his generative research on barriers for men in nursing education, O'Lynn (2004) established content validity for the IMFNP instrument; he also proposed theoretical validity and reported a satisfactory Cronbach alpha of .80, with .84 for the shortened version of the IMFNP (2007). O'Lynn's innovative work, although important in providing a foundation for the construct of male friendliness in nursing education, addressed barriers rather than facilitators. Romen and Anson (2005) performed factor analyses on survey responses but compared the motivations of both men and women to enter nursing. Their research supported the idea that among Israeli men in nursing, early exposure to role models and relatives other than parents in the health professions was significantly (n = 123, X^2 (1) = 7.40, p < .01) important (Romen & Anson, 2005).

Because there was a demonstrable lack of instruments that assessed facilitators for men in nursing education with support for reliability and validity, the SFM met a critical need. The SFM evaluated facilitators in three important domains for men in nursing education: the Internal facilitators, the External Connections facilitators, and the Institutional facilitators; psychometric testing of the SFM then provided support for reliability and validity of the instrument.

Factors Associated with Purpose in Life

This research hypothesized that purpose in life played a role as a facilitator for male nursing students, although purpose in life had not been examined in relation to any identified nursing students in the literature. Purpose in life has been previously studied in other populations, including hospitalized alcoholics (Crumbaugh & Maholick, 1964) and schizophrenics (Yarnell, 1971), military and veterans (Yarnell, 1971), and high school

(Martin & Martin, 1977) and college students and community members (Crumbaugh & Maholick, 1964; DeWitz, Woolsey & Walsh, 2009; Molasso, 2006; Morgan & Farsides, 2009; Schulenberg & Melton, 2010). Purpose in life did not appear to be related to age, IQ (Yarnell, 1971), or educational level (Crumbaugh, 1968). The literature supported the association of purpose in life with "very positive characteristics" (Molasso, 2006, p. 21), such as self-efficacy (DeWitz et al., 2009) and self-actualization (Martin & Martin, 1977), and healthy outcomes such as a higher GPA and increased self-confidence (Martin & Martin, 1977).

In this research, a modest but significant amount of the variance in purpose in life (17%, 14% adjusted) was associated with a significant demographic item (having a comfortable income level), as well as with the SFM domain subtotals. Multiple regression supported the use of a comfortable income and the SFM Internal domain subtotal in predicting a significant amount of variance in purpose in life. Interestingly, the association of purpose in life and a comfortable income was not found in the literature; no study discovered even included income level as a reported demographic item.

The usefulness of the SFM Internal domain subtotal in predicting a significant amount of variance in purpose in life supported an earlier factor analysis of purpose in life, in which Morgan and Farsides identified two major purpose in life factors as an "exciting life" and a "purposeful life" or interesting life (2009, p. 201). These two items, exciting life and interesting life, were included in the SFM Internal domain items. Although many other things clearly impacted purpose in life in this sample, the findings supported construct validity through the use of the SFM Internal domain subtotal as one way to assess the strength of purpose in life as an individual facilitator for men in nursing education.

The SFM and Internal domain were modestly and significantly correlated with the PIL, supporting criterion-related validity. The fact that the PIL was not significantly

correlated with either the External Connections or the Institutional facilitators is not surprising, because purpose in life is an intrapersonal facilitator rather than one formed through connections with others or created through institutional policies.

Factors Associated with GPA

In regard to GPA at BSN graduation, while the model of age at BSN, sexual preference, purpose in life, Internal, External Connections, and Institutional facilitators together accounted for a modest but significant amount of variance (13%, 9% adjusted) in GPA, only age at BSN and the External Connections facilitators domain subtotal emerged as significant predictors of GPA. While GPA clearly was impacted by many factors that were not studied in this research, the fact that both age and the measure of External Connections were significant predictors was considered important. Literature supported the idea that men in nursing tended to be older than traditional students (LaRocco, 2006; Okrainec, 1994), which may have resulted in higher GPAs. The relationship between GPA and the External Connections facilitators domain was intriguing because it supported conceptual validity for the idea that the relationships formed between nursing students and faculty had a direct academic impact. Men in nursing placed a high value on their relationships with instructors (Brady & Sherrod, 2003). Faculty who fostered connections with their students provided a sense of meeting, where the possibilities of students were affirmed and their visions were enlarged, and they were encouraged to grow in the direction of that new vision (Gillespie, 2005). Connections were formed by sharing activities both in and out of class and sometimes by engaging in something as simple as “small acts of conversation” (Diekelmann & Diekelmann, 2009, p. 360). The growth of connections between students and faculty enabled students to view faculty as caring and psychologically supportive, which Shelton (2003) associated with student retention. The building of connections was also a potent antidote to the sense of isolation or not feeling welcomed that many men in

nursing have reported (Bell-Scriber, 2008; Ierardi et al., 2010; Keogh & O'Lynn, 2007; MacWilliams et al., 2013; Meadus & Twomey, 2011; O'Lynn, 2004; Stott, 2007).

Factors Associated with Nursing Success

For nursing success, the highly significant regression model included age, children, married status, comfortable income, attaining an MSN, purpose in life, and the three facilitator domains. The model accounted for a considerable amount of variance in nursing success (49%, 45% adjusted). While age and married status were determined through regression not to be important, MSN-prepared nurses with children, a comfortable income, and a higher sense of purpose in life rated themselves as significantly more professionally successful. As previously mentioned, increased purpose in life has been associated with a measure of academic success, the GPA (Martin & Martin, 1977) but an extensive study for specific measures of nursing success was not part of this research. However, Villeneuve (1994) noted that men were likely to be older and more educated when they entered nursing and that some were seeking a second degree, which may help to explain the association between having an MSN and feeling more successful. Earning an advanced degree in nursing may have been considered as both a mark of professional achievement and a necessary requirement for the advanced level of practice many men held as a professional goal (Ellis et al, 2006; Kleinman, 2004; LaRocco, 2006; Okrainec, 1994; Stott, 2007; Villeneuve, 1994).

Although overall life satisfaction was not the same as nursing success, there were similarities noted in the literature between the two concepts, especially in terms of purpose in life. In a study of Chinese college students studying abroad, Pan, Wong, Joubert, and Chan (2008) found that meaning/purpose in life had a highly significant positive correlation with overall life satisfaction. The strong positive correlation between life satisfaction and purpose in life supported the findings in this research. In addition, among men who were practicing nursing, LaRocco (2006) found that career satisfaction,

family, and a sense that nursing was a genderless profession were especially important. Okrainec (1994) noted that more men than women would choose nursing again or recommend it as a career for men, which is a measure of satisfaction with the profession. Men also seemed to have a more positive sense of their ability to succeed in nursing, when compared with women; they even perceived their nursing careers to be better than anticipated (Roth & Coleman, 2008). Men in nursing were more likely to express feelings of confidence, excitement, and success (Streubert, 1994), to be motivated by challenges and to enjoy a sense of mastery (Stott, 2007), and to incorporate their previous occupational experiences into nursing (Streubert, 1994).

Another connection of purpose in life and nursing success was suggested in the literature, as Smith (2006) noted that non-traditional male nursing students were able to develop a sense of perspective and pragmatism; this aligned with Frankl's belief that people were able to deal with suffering by changing their perspective or by practicing self-detachment (1969). The men in Smith's study tended not to take barriers they encountered personally, reflecting that these episodes were ramifications of entering a female-dominated profession. They also knew through their life experiences that they had faced and mastered larger problems. Therefore, they refused to allow smaller issues to affect their success. Other men in nursing also utilized a sense of self-detachment to help motivate them to remain in nursing programs despite the barriers they encountered, as they reasoned that nursing school was not the same thing as real world practice (Ellis et al., 2006).

Theoretical Implications

This research introduced the concept of facilitators for men during nursing education. The conceptual model (Figure 1) was developed from consideration of the literature related to what assisted or hindered men as they studied nursing, especially O'Lynn's examination of barriers in his Construct of Male Friendliness in Nursing

Programs (2007). The model was strengthened with the addition of purpose in life as a facilitator, derived from Frankl's theory of meaning (1955). Purpose in life has been supported in literature as a powerful motivator in other populations but had not previously been studied in nursing students.

The research findings provided support for the conceptual model. The model proposed that respondent demographic characteristics could act as facilitators. In this sample, age at BSN, having children, acquisition of MSN degree, and comfortable income level were significant predictors for two of the outcome variables (GPA and nursing success), as well as for two of the three SFM domain subtotals (Internal facilitators and External Connections facilitators). The use of the SFM total was upheld by factor analyses, also supporting the conceptual model. Both the Internal facilitators domain, and a comfortable income were significant predictors for purpose in life, thus providing additional support for the conceptual model.

In the model, the facilitators were grouped into three domains. The Internal facilitators were experienced most often, followed by the External Connections facilitators, and then the Institutional facilitators. While factor analyses results were consistent with the model, the frequency at which these facilitators were or were not experienced was somewhat surprising in view of the literature because research most frequently addressed Institutional issues. Although Institutional facilitators did not closely align with any outcome variables, they may have been more closely related with some of the other, smaller factors identified during factor analyses. There may also have been variability measurement issues that inadequately assessed this important component.

Another interesting finding was the importance of the second most often experienced facilitator domain, the External Connections facilitators. The External Connections with faculty as a facilitator has been minimally examined. When it is examined, it is usually in the context of stressed or disadvantaged nursing students

(Goff, 2011; Seago, Wong, Keane, & Grumbach, 2008). For men in nursing, External Connections has been examined mostly in terms of the importance of male role models and mentors. This facilitating aspect of the model would benefit from additional research to examine the role of faculty gender in building supportive relationships with students.

Purpose in life, previously unexplored in nursing students, was most closely associated with the Internal facilitators domain, indicating that the Internal facilitators subtotal might be useful as an approximate measure of purpose in life. Increased purpose in life also was associated with the outcome variable of a greater perception of nursing success, supporting the conceptual model that hypothesized purpose in life as a strong facilitator for men during nursing education. External Connections facilitators were most closely associated with age at BSN graduation and the outcome variable of a higher GPA at graduation; this supported the conceptual model that hypothesized demographic characteristics and student connections with faculty as important facilitators. Institutional facilitators did not closely align with any outcome variables, despite their importance in the literature; this may have been a result of measurement error rather than the importance of these hypothesized facilitators. Overall, using a conceptual model developed from the literature and current knowledge about this population, empirical support for the model was provided through the process of testing relationships to support construct validity for the SFM tool and its domains.

Research Implications

Future research could advance the SFM in several important areas. While the psychometric properties of the SFM were strong in this study, further psychometric testing of this measure is warranted to further support construct validity. Confirmatory factor analyses with a larger and more diverse sample would increase confidence that the factor structures revealed could be generalized to different samples in the population. Further research using the SFM as an outcome measure driven by the

proposed conceptual model would be beneficial, as would a longitudinal design to assess changes over time. Administering the SFM to both men and women might reveal important gender differences with regard to facilitators in nursing education. This study, particularly in reference to purpose in life and the SFM facilitators, provided important areas for future intervention development to make nursing programs more welcoming, particularly for men. Results from this study might inform potential strategies to improve learning that can be later tested for efficacy in randomized controlled trials. Future study also may include the incorporation of purpose in life and facilitators into interventions that can then be tested for efficacy.

Implications for Nursing Education

There are several implications for nursing education from this study that may be applied to the provision of nursing education for men. Although the lack of Institutional facilitators have often been reported in the literature, the findings from this study specifically revealed the infrequency of faculty instruction related to gendered differences in communication and caring behaviors. Men in this study also reported lack of inclusion of men into the discussion of nursing history. Mentorship and support from faculty also were reported as a need by the men in this sample. The fostering of male student connections with faculty of both genders, as well as with peers, played an important role in academic success. Faculty should be encouraged to create opportunities for building formal and informal connections with students, such as service projects, mission trips, or even simply chatting over coffee. The importance of purpose in life as a facilitator should be emphasized to faculty, especially since it could be impacted through well-chosen interventions. Assisting nursing students to visualize themselves as practicing nurses can help to insulate students against the stresses and struggles that are part of nursing education. Purpose in life can also be strengthened by thoughtful conversations between faculty advisors and students that focus on the student's

achievement of interim goals and help the student reflect on his or her original vision of being a practicing nurse. Although more research in this area is warranted, this study provides support for improving existing programs to facilitate nursing education for men. The SFM also showed strong evidence of reliability and validity and might someday serve as an important measure to evaluate the facilitators for men in existing nursing programs.

Limitations

This research utilized a non-randomized purposive sample with a modest response rate (14%); the 145 respondents were mostly Caucasian (87%), non-Hispanic (92%), and heterosexual (83%). This limited the generalizability of the results, which should be interpreted with caution in minority or homosexual populations. The interpretation of study findings was limited also by the measures used for the dependent variables of nursing success and number of NCLEX attempts. The perception of nursing success was an intricate phenomena that developed over time, but the cross-sectional design of the instrument limited the conclusions that might be drawn regarding the influence of facilitators on the respondent's perception of nursing success (Brutus, Aguinis, & Wassmer, 2013). For the number of NCLEX attempts, the amount of missing responses (12%), coupled with the insufficient number of cases in the second (10%) or third (2%) attempts categories, resulted in insufficient power (Munro, 2005) to evaluate NCLEX attempts as a dependent variable. An additional limitation was the use of a newly developed survey with no prior psychometric testing. While evaluation of the instrument provided initial support for reliability and validity for the SFM, additional testing would be beneficial to further support construct validity, establish norms, and enhance objectivity (Netemeyer et al., 2003).

Conclusion

This study dealt with a previously unaddressed gap in the literature for men in nursing education: the lack of identified facilitators. Guided by an empirically supported conceptual model, the new 13-item SFM instrument, which is short and easy to administer and score, evidenced support for reliability and validity. The SFM further demonstrated that factors such as demographic characteristics, Internal facilitators, External Connections facilitators, Institutional facilitators, and purpose in life explained a significant amount of variance in GPA and respondents' perception of nursing success in a sample of 145 men in nursing. This study, particularly in reference to purpose in life and the SFM facilitators, provided critical information for the development of future interventions and programs to make nursing programs more welcoming and supportive for men. The findings from this study may be used to increase researchers' knowledge regarding this population of nurses and potential nurses and may assist educators in the development of interventions to recruit and retain more men in nursing.

APPENDIX A

37-ITEM SFM AND RESPONDENT DEMOGRAPHIC CHARACTERISTICS FORM

Survey of Facilitators for Men (SFM)

During Nursing Education

Many things may be important to men in their successful completion of a nursing education program. Please rate the extent to which you experienced each of these facilitators when you were enrolled in your baccalaureate nursing program (individual results will be kept confidential).

Rate the following items on a scale of 1 to 5, with 1 being "DID NOT EXPERIENCE THIS" and 5 being "A GREAT AMOUNT." *I experienced this:*	1 Did not experience this	2 Small amount (some of the time)	3 Moderate amount (about half the time)	4 Large amount (most of the time)	5 Great amount (almost all of the time)
1. I felt accepted/respected by most patients during my clinical rotations.	1	2	3	4	5
2. There were opportunities to participate in a group supporting men in nursing.	1	2	3	4	5
3. I received positive feedback about my career choice from people important to me.	1	2	3	4	5
4. I developed caring relationships with some patients.	1	2	3	4	5
5. I kept social interactions separate from professional interactions.	1	2	3	4	5

6. Faculty taught me gender-specific communication strategies to promote good working relationships.	1	2	3	4	5
7. Faculty taught me how to touch patients respectfully when intimate care was needed.	1	2	3	4	5
8. My nursing school fostered a sense of “belonging” in students.	1	2	3	4	5
9. Some of my teachers were men.	1	2	3	4	5
10. Faculty demonstrated caring towards me.	1	2	3	4	5
11. My nursing program included a review of men’s contributions to the nursing profession.	1	2	3	4	5
I experienced this:	1 Did not experience this	2 Small amount (some of the time)	3 Moderate amount (about half the time)	4 Large amount (most of the time)	5 Great amount (almost of the time)
12. I felt comfortable interacting with females most of the time.	1	2	3	4	5
13. Men were included in school of nursing images, displays, marketing and recruitment materials.	1	2	3	4	5
14. I had a strong vision or goal to be a nurse.	1	2	3	4	5
15. Someone I cared about received excellent	1	2	3	4	5

care from a man in nursing.					
16. Being a nurse seemed like more than just a job to me.	1	2	3	4	5
17. My nursing program actively recruited men to enroll as students.	1	2	3	4	5
18. I believed that completing the nursing program was a way to achieve my long-term goals.	1	2	3	4	5
19. I had opportunities to work with male RNs in my clinical rotations.	1	2	3	4	5
20. I was assigned both male and female patients.	1	2	3	4	5
21. I plan to or have attended graduate school to further my career in nursing.	1	2	3	4	5
22. Faculty was usually available to meet with me.	1	2	3	4	5
23. I had prior volunteer or work experience providing patient care when starting nursing school.	1	2	3	4	5
24. Male mentors helped me understand how to maintain a male identity in a female-dominated profession.	1	2	3	4	5
25. Clinical instructors were supportive of male students.	1	2	3	4	5

I experienced this:	1 Did not experience this	2 Small amount (some of the time)	3 Moderate amount (about half the time)	4 Large amount (most of the time)	5 Great amount (almost of the time)
26. There were one or more faculty members I felt comfortable going to for advice.	1	2	3	4	5
27. I thought my life as a nurse would be exciting.	1	2	3	4	5
28. Some of my family and/or friends were nurses.	1	2	3	4	5
29. Faculty and staff were helpful when I became ill or had an emergency.	1	2	3	4	5
30. I was assigned patients with a wide range of conditions.	1	2	3	4	5
31. I had one or two supportive male friends while in nursing school.	1	2	3	4	5
32. I thought my life as a nurse would be interesting.	1	2	3	4	5
33. There were other male nursing students in classes and clinicals.	1	2	3	4	5
34. I was confident in my decision to become a nurse.	1	2	3	4	5
35. Faculty taught me that caring may be expressed differently by men and women.	1	2	3	4	5

36. Patients gave me positive feedback.	1	2	3	4	5
37. I felt comfortable interacting with males most of the time.	1	2	3	4	5

Is there anything else that should be included relating to male student success in nursing education?

_____
_____
_____
_____
_____
_____

Respondent Demographic Characteristics Form

1. What is your age? _____

2. What is your race?
   _____ American Indian or Alaska Native
   _____ Asian
   _____ Black or African American
   _____ Native Hawaiian or other Pacific Islander
   _____ White
   _____ Other or Unknown: Please specify _____

3. What is your ethnicity?
   _____ Hispanic or Latino
   _____ Not Hispanic or Latino

4. What is your marital status?
   _____ Single
   _____ Married
   _____ Separated
   _____ Divorced
   _____ Widowed
   _____ Other: Please specify _____

5. Do you have children?
   _____ Yes: How many? _____
   _____ No

6. What is your sexual preference?
   _____ Heterosexual
   _____ Homosexual
   _____ Bisexual
   _____ Transsexual
   _____ Prefer not to disclose

7. In your biologic family, what is your birth order? _____ of _____children

8. Are you currently a pre-licensure nursing student?
   _____ Yes
   _____ No

9. Do you have a BSN?
   _____ Yes
   _____ No

10. Select other degrees you have attained (Check all that apply)
    _____ LPN
    _____ ASN
    _____ MSN
    _____ Other Master's Degree (Please specify): _____
    _____ DNP
    _____ PhD
    _____ Other (Please specify): _____

11. What was your age at Baccalaureate Graduation? _____

12. What was your GPA at Baccalaureate Graduation? _____

13. How many times have you taken the NCLEX exam? _____

14. Did you pass the NCLEX exam?
    _____ Yes
    _____ No

15. Do you have <u>any</u> military service experience (enlisted or officer)?
    _____ Yes. If yes, how long did you serve? _____
    _____ No

16. Please indicate the ways you supported yourself (and your family) while you were a nursing student in the BSN program (Please check all that apply):
    _____ Full Time Job
    _____ Part Time Job
    _____ Employer Tuition Assistance
    _____ Scholarships
    _____ Student Loans
    _____ Personal/Family Savings
    _____ Veteran Education Benefits
    _____ Other (Please specify) _____

17. What is your current employment status?
    _____ Employed in nursing full-time
    _____ Employed in nursing part-time
    _____ Homemaker
    _____ Retired
    _____ Unemployed
    _____ Other: Please specify _____

18. Considering your household income from all sources (today), would you say that you are:
    _____ Comfortable
    _____ Just have enough to make ends meet
    _____ Do NOT have enough to make ends meet

19. On a scale of 0 - 10 (with 0 = “Not at all successful” and 10 = “Extremely successful”), how successful overall do you think you are in your current nursing career?
_____ Rating on a scale from 0 to 10

20. Would you be willing to take this survey again in approximately 2 weeks to help support reliability?

_____YES

_____NO

If you are willing to take this survey again in 2 weeks, please click here to provide your name and e-mail to where the survey link should be sent.

(You will receive an additional $10 Walmart gift card if you complete the survey a second time in two weeks, provided there is a way to contact you).

Thank you for participating in this study. We would like to send you a $10 Walmart gift card as a token of appreciation for your time and participation. If you would like to receive this gift card, please click here to provide your name and mailing address. This contact information will be kept securely and destroyed after all gift cards are mailed.

Your experience and ideas will help us to identify ways to support men in the future as they pursue nursing education. Please contact us if you have additional comments or would like to review group survey results at @indwes.edu or call 765.677.1428.

APPENDIX B

INSTITUTIONAL REVIEW BOARD APPROVAL AND PERMISSIONS

INDIANA UNIVERSITY

OFFICE OF RESEARCH ADMINISTRATION

To: TAMILYN BAKAS
NURSING

From: IU Human Subjects Office
Office of Research Administration – Indiana University

Date: July 08, 2013

RE: **EXEMPTION GRANTED**

Protocol Title: Examining Facilitators for Men During Nursing Education: Development and Psychometric Testing of the Survey of Facilitators for Men (SFM) Dissertation Research Proposal

Protocol #: 1307011770

Funding Agency/Sponsor: None

IRB: IRB-01, IRB00000220

Your study named above was accepted on July 08, 2013 as meeting the criteria of exempt research as described in the Federal regulations at 45 CFR 46.101(b), paragraph(s) (2) . This approval does not replace any departmental or other approvals that may be required.

As the principal investigator (or faculty sponsor in the case of a student protocol) of this study, you assume the following responsibilities:

Amendments: Any proposed changes to the research study must be reported to the IRB prior to implementation. To request approval, please complete an Amendment form and submit it, along with any revised study documents, to irb@iu.edu. Only after approval has been granted by the IRB can these changes be implemented.

Completion: Although a continuing review is not required for an exempt study, you are required to notify the IRB when this project is completed. In some cases, you will receive a request for current project status from our office. If we are unsuccessful at in our attempts to confirm the status of the project, we will consider the project closed. It is your responsibility to inform us of any address changes to ensure our records are kept current.

Per federal regulations, there is no requirement for the use of an informed consent document or study information sheet for exempt research, although one may be used if it is felt to be appropriate for the research being conducted. As such, these documents are returned without an IRB-approval stamp. Please note that if your submission included an informed consent statement or a study information sheet, the IRB requires the investigational team to use these documents.

You should retain a copy of this letter and any associated approved study documents for your records. Please refer to the project title and number in future correspondence with our office. Additional information is available on our website at http://researchadmin.iu.edu/HumanSubjects/index.html.

If you have any questions, please contact our office at the below address.

Thank you.

From: Erny, Richard C. [mailto: @iu.edu]
Sent: October 15, 2013 9:36 AM
To: Bakas, Tamilyn
Cc: Clark, Dot; '@iupui.edu'
Subject: IRB 1307011770 - Dr. Tamilyn Bakas = Amendment 1 - Nursing

Dr. Bakas,

I have been assigned to you Amendment for Study 1307011770. Upon reviewing your revisions I have determined that an Amendment is not required. Exempt studies do not have the same requirements as Expedited and Full Board studies and since your revisions do not alter the risk or scope of the study, but merely refine the questions asked, it does not require an Amendment.

You may proceed with study utilizing your revised survey.

Please let me know if you have any questions.

Rick Erny
Research Compliance Consultant - Teams 2 & 3
IU Human Subjects Office
Office of Research Administration
980 Indiana Ave / Indianapolis, IN 46202
(317) 278-3137 / @iu.edu

KC IRB, IU's new web-based system for entry and management of IRB submissions, is now live. **Effective immediately, all new studies must be submitted via the KC IRB system.** For specific instructions and training guides, click here. For more information about KC IRB, including FAQs, newsletters, our implementation timeline and upcoming training opportunities, visit our KC IRB Implementation page. If you have any questions about KC IRB, please feel free to contact the HSO at @iu.edu.

From: Bakas, Tamilyn
Sent: Thursday, October 03, 2013 3:17 PM
To: IRB
Cc: 'Clark, Dot (@indwes.edu)'; '@iupui.edu'
Subject: 1307011770 - Dr. Tamilyn Bakas = Amendment 1 - Nursing

Please review Amendment #1 for Study # 1307011770.

Thanks so much,

Tami
Tamilyn Bakas, PhD, RN, FAHA, FAAN
Professor and Chair
Department of Science of Nursing Care
Indiana University School of Nursing
1111 Middle Drive, NU 413
Indianapolis, IN 46202
Office: 317-274-4695/Email: @iupui.edu

APPENDIX C

STUDY INFORMATION SHEET AND INFORMED CONSENT

IRB STUDY #1307011770

I. INDIANA UNIVERSITY STUDY INFORMATION SHEET FOR

Examining Facilitators for Men During Nursing Education: Development and Psychometric Testing of the Survey of Facilitators for Men (SFM) Dissertation Research proposal

You are invited to participate in a research study of facilitators for men during nursing education. You were selected as a possible subject because you are a man aged 18 or greater who is practicing as a Registered Nurse and you attended a baccalaureate nursing program in the United States. We ask that you read this form and ask or e-mail us with any questions you may have before agreeing to be in the study.

The study is being conducted by Dr. Tamilyn Bakas, IU School of Nursing and Dorothy Clark-Ott PhD(c), IU School of Nursing. It is funded in part by Indiana Wesleyan University School of Nursing.

STUDY PURPOSE

The purpose of this study is to find out what helps men to be successful as they study to become Registered Nurses, and to determine how important these individual items are. Understanding what men consider helpful during nursing education can improve the educational experience of men in nursing and result in more men becoming Registered Nurses.

PROCEDURES FOR THE STUDY:

If you agree to be in the study, you will do the following things:
You will receive an electronic link to the Survey of Facilitators for Men (SFM), posted on surveymonkey.com. You will be asked to complete the SFM, including a demographic characteristics form and a brief Purpose In Life survey. The surveys will take less than 15 minutes to complete. Respondents will each receive a $10 Walmart gift card, provided that you select a separate link to include an address so that the gift card can be sent. You will also be asked if you are willing to retake the same surveys in two weeks. You will receive an additional $10 Walmart gift card for completing the surveys a second time, as long as you have provided a mailing address. Mailing addresses will be maintained in a separate location from survey data and handled confidentially.

CONFIDENTIALITY

Efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law. Your identity will be held in confidence in reports in which the study may be published and databases in which results may be stored.

Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the study investigator and his/her research associates, the Indiana University Institutional Review Board or its designees, the study sponsor Indiana Wesleyan University School of Nursing, and (as allowed by law) state and federal agencies, specifically the Office for Human Research Protections.

PAYMENT

You will receive a $10 Walmart gift card for taking part in this study, provided that you select a separate link to include an address so that the gift card can be sent. If you agree to take the same surveys again in 2 weeks, you will receive an additional $10 Walmart gift card.

CONTACTS FOR QUESTIONS OR PROBLEMS

For questions about the study, contact the researcher Dorothy Clark-Ott at or @indwes.edu

For questions about your rights as a research participant or to discuss problems, complaints or concerns about a research study, or to obtain information, or offer input, contact the IU Human Subjects Office at (317) 278-3458 or [for Indianapolis] or (812) 856-4242 [for Bloomington] or (800) 696-2949.

VOLUNTARY NATURE OF STUDY

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. Leaving the study will not result in any penalty or loss of benefits to which you are entitled. Your decision whether or not to participate in this study will not affect your current or future relations with Indiana University.

APPENDIX D

PURPOSE IN LIFE (PIL) SCALE

Purpose in Life Test (PIL)
(Crumbaugh & Maholick, 1964)

Instructions: For each statement, circle the number that corresponds to what is most true for you right now.

1. I am usually:	1 bored	2	3	4	5 enthusiastic
2. Life to me seems:	1 completely routine	2	3	4	5 always exciting
3. In life, I have:	1 no goals or aims	2	3	4	5 clear goals and aims
4. My personal existence is:	1 utterly meaningless, without purpose	2	3	4	5 purposeful and meaningful
5. Every day is:	1 exactly the same	2	3	4	5 constantly new and different
6. If I could choose, I would:	1 prefer never to have been born	2	3	4	5 want 9 more lives just like this one
7. After retiring, I would:	1 loaf completely the rest of my life	2	3	4	5 do some of the exciting things I've always wanted to
8. In achieving life goals, I've:	1 made no progress whatever	2	3	4	5 progressed to complete fulfillment
9. My life is:	1 empty, filled only with despair	2	3	4	5 running over with exciting things
10. If I should die today, I'd feel that my life has been:	1 completely worthless	2	3	4	5 very worthwhile
11. In thinking of my life, I:	1 often wonder why I exist	2	3	4	5 always see reasons for being here
12. As I view the world in relation to my life, the world:	1 completely confuses me	2	3	4	5 fits meaningfully with my life
13. I am a:	1 very irresponsible person	2	3	4	5 very responsible person
14. Concerning freedom to choose, I believe humans are:	1 completely bound by limitations of heredity and environment	2	3	4	5 totally free to make all life choices
15. With regard to death, I am:	1 unprepared and frightened	2	3	4	5 prepared and unafraid
16. Regarding suicide, I have:	1 thought of it seriously as a way out	2	3	4	5 never given it a second thought
17. I regard my ability to find a purpose or mission in life as:	1 practically none	2	3	4	5 very great
18. My life is:	1 out of my hands and controlled by external factors	2	3	4	5 in my hands and I'm in control of it
19. Facing my daily tasks is:	1 a painful and boring experience	2	3	4	5 a source of pleasure and satisfaction
20. I have discovered:	1 no mission or purpose in life	2	3	4	5 a satisfying life purpose

APPENDIX E

CONTENT VALIDITY INSTRUMENT AND INSTRUCTIONS FOR CONTENT EXPERTS

July 19, 2013

Dear Colleague,

Thank you for agreeing to serve as a content expert for the *Survey of Facilitators for Men (SFM) during nursing education* that is being examined as part of my doctoral research. The purpose of this study is to determine the psychometric properties of the SFM. Before testing the psychometric properties of this scale, I need your input as an expert to establish evidence of content validity for the SFM.

Instructions for completing the content validity evaluation and the conceptual definition are included on the next page, preceding the instrument you will examine. It may be easiest to save the survey as a word document, highlight your selections, add your comments and suggestions, and then send the saved document back to me at this e-mail address. Should you prefer to print it out and complete it by hand before mailing it back, the address is: Dorothy Clark-Ott, Indiana Wesleyan University School of Nursing

It would be most appreciated if you could return the materials to me within 2 weeks of your receipt. If you have any questions, please do not hesitate to contact me at @indwes.edu (cell phone). Again, thank you for your participation.

Dorothy (Dot) Clark-Ott, PhD(c)

Content Validity for the Survey of Facilitators for Men (SFM) during nursing education

Instructions: Below are items designed to represent the concept of facilitators for men during nursing education. These items will be rated on a 5-point response scale when administered to participants in answer to the prompt "I experienced this." (1 = Did not experience this, 2 = A small amount [some of the time], 3 = A moderate amount [about half the time], 4 = A large amount [most of the time], 5 = A great amount [almost all of the time]).

- Please read the conceptual definition below. For each item, select the box indicating the subcategory to which you think it belongs (internal, external, institutional). Then rate the individual items for the degree of relevance to the subcategory in which you think it belongs using the response scale below.
- In the comments box, please add any comments or edits that might improve the item.
- In the empty rows below, please add additional items or areas of the conceptual definition that are not represented by the items.

Conceptual definition: Facilitators are defined in this study as qualities that support and promote the success of men during nursing education. Facilitators consist of three areas:

- Internal facilitators are defined as the ***intrapersonal*** strengths, experiences and motivators that men bring to their pursuit of their nursing career.
- External facilitators are defined as the ***interpersonal*** connections that emerge from the relationships that men have, develop or cultivate with others outside of the nursing program who are valued or influential.

- Institutional facilitators are defined as the structural or **organizational** aspects of nursing programs or institutions that are designed to ease constraints in nursing student activities or to eliminate barriers identified by male nursing students; this includes interpersonal relationships with faculty and staff within the nursing program.

Content Validity for the Survey of Facilitators for Men (SFM) during nursing education

Int = Internal
Ext = External
Inst = Institutional

1 = NR = Not Relevant
2 = SR = Slightly Relevant, in need of major revision
3 = MR = Moderately Relevant, in need of minor revision
4 = VR = Very Relevant and succinct

Item	Int	Ext	Ins	NR	SR	MR	VR	Comments
1. I received positive feedback from patients.	Int	Ext	Inst	1	2	3	4	
2. Men were included in school of nursing images, displays and materials.	Int	Ext	Inst	1	2	3	4	
3. I had patient care experience before starting nursing school.	Int	Ext	Inst	1	2	3	4	
4. Faculty/staff accommodated my work/family/college sports schedules.	Int	Ext	Inst	1	2	3	4	
5. College facilities (e.g. offices, bookstore, library) were open when I needed them.	Int	Ext	Inst	1	2	3	4	
6. I had at least one faculty member I felt comfortable going to for advice.	Int	Ext	Inst	1	2	3	4	
7. Simulation technology was available for most nursing courses.	Int	Ext	Inst	1	2	3	4	
8. The flexibility of a nursing career was important to me.	Int	Ext	Inst	1	2	3	4	

Item	Int	Ext	Inst	NR	SR	MR	VR	Comments
9. My nursing program included historical review of the contributions man have made to the nursing profession.	Int	Ext	Inst	1	2	3	4	
10. I had opportunities to work with male RNs in my clinical rotations.	Int	Ext	Inst	1	2	3	4	
11. In work and school settings, I learned to keep professional interactions separate from social interactions with female co-workers or fellow students.	Int	Ext	Inst	1	2	3	4	
12. Faculty taught me that caring may be expressed differently by men and women.	Int	Ext	Inst	1	2	3	4	
13. Tutoring and academic support services were convenient for me.	Int	Ext	Inst	1	2	3	4	
14. Male faculty or mentors helped me understand how to maintain a male identity in a female-dominated profession.	Int	Ext	Inst	1	2	3	4	
15. Gender-neutral colors/décor were used in school classrooms and group areas.	Int	Ext	Inst	1	2	3	4	

Item	Int	Ext	Inst	NR	SR	MR	VR	Comments
16. My gender was helpful as I developed caring relationships with some patients.	Int	Ext	Inst	1	2	3	4	
17. Faculty taught me how to touch patients respectfully when intimate care was needed.	Int	Ext	Inst	1	2	3	4	
18. I believed that getting through the nursing program was a way to achieve my long-term goals.	Int	Ext	Inst	1	2	3	4	
19. I developed a sense of humor about being mistaken for a physician.	Int	Ext	Inst	1	2	3	4	
20. Clinical instructors were supportive of male students.	Int	Ext	Inst	1	2	3	4	
21. I felt accepted by most physicians during my clinical rotations.	Int	Ext	Inst	1	2	3	4	
22. I developed effective ways to reduce my own stress while in nursing school.	Int	Ext	Inst	1	2	3	4	
23. I thought my life would be exciting and interesting as a nurse.	Int	Ext	Inst	1	2	3	4	
24. My gender was helpful as I developed collegial relationships with some instructors.	Int	Ext	Inst	1	2	3	4	

Item	Int	Ext	Inst	NR	SR	MR	VR	Comments
25. My nursing program had content on men's health issues.	Int	Ext	Inst	1	2	3	4	
26. I felt a sense of "belonging" at my nursing school.	Int	Ext	Inst	1	2	3	4	
27. I felt accepted by most patients during my clinical rotations.	Int	Ext	Inst	1	2	3	4	
28. I was invited to participate in all student activities.	Int	Ext	Inst	1	2	3	4	
29. Faculty mentors/advisors were usually available to meet with me.	Int	Ext	Inst	1	2	3	4	
30. I was taught by male nursing faculty.	Int	Ext	Inst	1	2	3	4	
31. Faculty demonstrated caring towards me.	Int	Ext	Inst	1	2	3	4	
32. I learned how to adapt my behavior in clinical settings in response to patients' expectations.	Int	Ext	Inst	1	2	3	4	
33. My nursing program prepared me to work with primarily female co-workers.	Int	Ext	Inst	1	2	3	4	
34. Faculty and staff were helpful when I became ill or had an emergency.	Int	Ext	Inst	1	2	3	4	
35. Faculty taught me about the appropriate use of touch in patient care.	Int	Ext	Inst	1	2	3	4	

Item	Int	Ext	Inst	NR	SR	MR	VR	Comments
36. I had a strong vision or goal to be a nurse.	Int	Ext	Inst	1	2	3	4	
37. Faculty taught me how to overcome communication differences between men and women to ensure good therapeutic and working relationships.	Int	Ext	Inst	1	2	3	4	
38. I felt accepted by the families of most patients during my clinical rotations.	Int	Ext	Inst	1	2	3	4	
39. I felt comfortable interacting with women most of the time.	Int	Ext	Inst	1	2	3	4	
40. Child care services were available.	Int	Ext	Inst	1	2	3	4	
41. My nursing program actively recruited men to enroll as students.	Int	Ext	Inst	1	2	3	4	
42. I was assigned a wide range of patients, rather than mostly men or the most behaviorally difficult or heaviest patients.	Int	Ext	Inst	1	2	3	4	
43. I had a long-term nursing career plan.	Int	Ext	Inst	1	2	3	4	
44. Additional financial aid was available to help with expenses.	Int	Ext	Inst	1	2	3	4	

Item	Int	Ext	Inst	NR	SR	MR	VR	Comments
45. I was confident in my decision to become a nurse.	Int	Ext	Inst	1	2	3	4	
46. I had time to reflect on and discuss what I was learning	Int	Ext	Inst	1	2	3	4	
47. Faculty taught me how to multi-task my nursing care when possible.	Int	Ext	Inst	1	2	3	4	
48. Faculty reviewed normal male and female anatomy when teaching intimate care skills.	Int	Ext	Inst	1	2	3	4	
49. Being a nurse seemed like more than just a job to me.	Int	Ext	Inst	1	2	3	4	
50. Someone I cared about or I myself received excellent care from a man in nursing.	Int	Ext	Inst	1	2	3	4	
51. I felt welcomed by most RN staff in my clinical rotations.	Int	Ext	Inst	1	2	3	4	
52. In some ways, nursing school was easier for men than women.	Int	Ext	Inst	1	2	3	4	
53. As a nurse, I thought I could make a real difference in someone's life.	Int	Ext	Inst	1	2	3	4	
54. Faculty used a variety of teaching methods (e.g. discussions, individual projects, debates, group assignments).	Int	Ext	Inst	1	2	3	4	

Item	Int	Ext	Inst	NR	SR	MR	VR	Comments
55. I had the opportunity to participate in a group supporting men in nursing.	Int	Ext	Inst	1	2	3	4	
56. Upper-level students were available to help me in the lab when I was learning skills.	Int	Ext	Inst	1	2	3	4	
57. Faculty taught me that men may approach organization of nursing tasks differently from women.	Int	Ext	Inst	1	2	3	4	
58. I received positive feedback about my career choice from people important to me.	Int	Ext	Inst	1	2	3	4	
59. There were other male nursing students in classes and clinicals.	Int	Ext	Inst	1	2	3	4	
60. I had some free time for relaxation/recreation with friends.	Int	Ext	Inst	1	2	3	4	
61. I felt prepared to assume leadership roles.	Int	Ext	Inst	1	2	3	4	
62. Most of my nursing textbooks referred to nurses as both males and females.	Int	Ext	Inst	1	2	3	4	
63. I had family or friends who were nurses.	Int	Ext	Inst	1	2	3	4	

Item	Int	Ext	Inst	NR	SR	MR	VR	Comments
64. I had one or two supportive friends while in nursing school.	Int	Ext	Inst	1	2	3	4	
65. I was referred to more often as simply a nurse, rather than a “male nurse.”	Int	Ext	Inst	1	2	3	4	

Are there any additional areas or items you believe should be included in this instrument?

_____
_____
_____
_____
_____
_____
_____
_____
_____

Thank you for your input!

REFERENCES

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Zika, S., & Chamberlain, K. (1987). Relation of hassles and personality to subjective well-being. *Journal of Personality and Social Psychology, 53*(1), 155–162.

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CURRICULUM VITAE

Dorothy G. Clark-Ott

EDUCATION

	Institution	Degree	Date
UNDERGRADUATE:	Binghamton University Binghamton NY	Bachelor of Science Nursing	1976
GRADUATE:	Wright State University Fairborn OH	School Nurse Graduate Certificate	1995
	University of Dayton Dayton OH	Master of Public Administration	2007
	Indiana University Indianapolis IN	PhD Nursing Research	2015

ACADEMIC APPOINTMENTS

Indiana Wesleyan University, School of Nursing	Assistant Professor	2010–present
Indiana Wesleyan University, School of Nursing	Instructor	2008–2010
Indiana Wesleyan University, School of Nursing Marion, Indiana	Adjunct Faculty	2006–2008

CLINICAL APPOINTMENTS

Indiana Wesleyan University, School of Nursing Marion, Indiana	Clinical Placement	2006–2008

United States Air Force Reserve Wright-Patterson AFB OH	Flight Nurse, Executive Officer Global aeromedical evacuation and support	2004–2009
Dayton Public Schools Dayton OH	Mobile Health Programs Coordinator School-Based Health Programs for 15,000 students	1997–2006
Dayton Public Schools Dayton OH	School Nurse School-Based Health Programs	1996
Specialty Care of Ohio Dayton, Ohio	Quality Services Consultant NCQA Certification for behavioral healthcare	1994–1995
United States Air Force Reserve Wright-Patterson AFB OH	Flight Nurse Officer Global aeromedical evacuation and support	1991–1994
USAF/Veterans Admin. Wright Patterson AFB OH	Operating Room (OR) Staff Nurse Administration and circulation, 12 room OR suite	1990–1994
United States Air Force Wright-Patterson AFB OH	Charge Officer, Sterile Processing Managed sterile instruments, supplies for facility	1989–1990

United States Air Force Wright-Patterson AFB OH	Nurse/Officer, Operating Room Administration and circulation, 12 room OR suite	1987–1989
Chesapeake General Hospital Chesapeake VA	Staff Nurse Out-Patient Surgery, 6 room OR suite	1986–1987
Dr. Vincent Speckhart Norfolk VA	Oncology Office Nurse Chemotherapy and patient teaching	1986
United States Naval Hospital Portsmouth VA	Civilian Plastic Surgery/OR Nurse Outpatient and inpatient plastic surgery	1984–1985
United States Air Force Reserve Langley AFB VA	Nurse/Officer Assistant in Charge, Operating Room	1984–1987
United States Air Force Langley AFB VA	Nurse/Officer OR, ER, ICU/CCU	1981–1984
United States Air Force Scott AFB IL	Nurse/Officer Labor & Delivery, OR	1978–1981
St. Barnabas Medical Center Livingston NJ	Staff Nurse Medical/Oncology	1977–1978
Susquehanna Nursing Home Binghamton NY	Nurse Manager Intermediate Care Facility	1976–1977

REGISTERED NURSE LICENSURE State of Indiana

CERTIFICATION: National Certification School Nurse (NCSN) 2008–2018
National Board for Certification of School Nurses

PROFESSIONAL MEMBERSHIPS

2007–present Sigma Theta Tau, National Honor Society for Nursing, Eta Chi Chapter
2006–present American Assembly for Men in Nursing
1996–2010 National Association of School Nurses
2006–2010 Indiana Association of School Nurses

TEACHING ASSIGNMENTS

Pre-Licensure Nursing

N436 and Transition To Nursing (TTN) Nursing Research	Senior level (didactic): 2011-present
N470 TTN Community Health Nursing	Senior level (didactic): 2010-present
N470 Community Health Nursing	Senior level (didactic: 2012 & clinical): 2006-present
N242 Nutrition	Sophomore level (didactic): 2007-2012
N242 TTN Nutrition	Second degree Program (didactic): 2008

N232 Adv Principles of Intervention	Sophomore level (didactic & clinical) 2010
N221 Principles of Intervention	Sophomore level (didactic & clinical): 2008-2010
N145 Fundamentals of Nursing	Freshman level (didactic): 2008-2009

UNIVERSITY SERVICE

Faculty, School of Nursing (SON)	2008–present
President, SON Faculty Senate	2013–present
University Academic Affairs Council	2013–present
University Faculty Relations Council	2013–present
University Technology Council	2013–present
University Scholarship Committee	2012-2013
SON Rep. to IWU Faculty Senate	2010–2012
SON Faculty Life Committee	2010–2012
SON Student Life Committee	2010
SON Policy & Procedure Committee	2006–2008
Faculty Advisor, Men in Nursing	2006–present
Faculty Advisor, Student Nurse Assoc.	2013–present

PROFESSIONAL SERVICE

Sigma Theta Tau International (STT), Eta Chi Chapter, Vice President	2008–2010
STT Innovations in Nursing Conference Planning Committee	2008–present
Indiana Association of School Nurses Annual Conference Planning Com	2008–2011
Ohio School Based Health Care Association, President	2006
Ohio School Based Health Care Association, Finance Committee	2007–2008

COMMUNITY SERVICE

Community Service/Education with Freedom & Faith of Indiana Coalition	2009–present
Wabash Kindergarten Round-up Team, Wabash IN	2006–2011

GRANTS AND AWARDS

Indiana Wesleyan University SON Research Award, $2000, 2013–2014

Clark-Ott, D. & Ihrke, B.: Indiana Wesleyan University Scholarship Award 2008–2009; Alumni research to facilitate program activities and promote Indiana Wesleyan University's Men in Nursing $2000.

Clark, D.: Ohio Minority Health Coalition 2004
Education program for minority women's health $250.

Dayton Public Schools (contributor): 21st Century Community Schools Grant, 2002–2005. Funding to operate multiple site school programs with health component $500,000.

Dayton Public Schools (contributor): Success 2000 Grant, 1999–2002. Funding to operate alternative high school with health component $350,000.

Dayton Public Schools (contributor): Physicians' Charitable Foundation of the Miami Valley, 1996–2005. Funding to design and operate School-Based Health Mobile Unit $998,000.

PUBLICATIONS

Jaballas, J., Clark-Ott, D., Clasen, C., Stolfi, A., & Urban, M. (2011). Parents' perceptions of their children's weight, eating habits and physical activities at home and at school. *Journal of Pediatric Health Care, 25*(5), 294–301.

Clark, D., Clasen, C., Stolfi, A., & Jaballas, J. (2002). Parent knowledge and opinions of school health services in an urban public school system. *The Journal of School Health, 72*(1), 18-22.

PROFESSIONAL PRESENTATIONS

Examining Facilitators for Men during Nursing Education. American Assembly for Men in Nursing (AAMN) Annual Conference, Newark, NJ, October 2013.

The Three H's of Forging a Value-added Practice: Humor, Holistic Practice and Heroism. American Assembly for Men in Nursing (AAMN) Annual Conference, San Francisco CA, October 2012.

Adapting a Nursing Research Class to Advance IOM Goals. American Assembly for Men in Nursing (AAMN) Annual Conference, Lexington KY, October 2011.

Obesity Management in Schools: What's Working? Indiana Association of School Nurses Annual Conference, Indianapolis IN, November 2010.

Evidence-Based Practice in School Nursing. Indiana Association of School Nurses Annual Conference, Indianapolis IN, November 2009.

Men in Nursing: Lessons Learned from Missions and Military. Innovations in Nursing Education, Eta Chi Chapter of Sigma Theta Tau International Regional Conference, Indiana Wesleyan University July 2008.

The Four A's of School-Based Health Care. CATCH (Communities Aligned Toward Children's Health) Indianapolis, Indiana, November 2006.

School-Based Health Care. Ohio Association of School Nurses Annual Conference, Columbus, Ohio April 2006.

Agenda for School-Based Health Care. Ohio Nurses Association Legislative Day Address, Columbus, Ohio March 2006.