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# Perceived Social Support and Female Baccalaureate Nursing Students in the Southwest

Jane L. Smith

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PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

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This dissertation is approved, and it is acceptable in quality and form for publication.

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PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

**PERCEIVED SOCIAL SUPPORT AND FEMALE BACCALAUREATE  
NURSING STUDENTS IN THE SOUTHWEST**

**BY**

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BSN, Nursing, University of Texas at El Paso, 1990  
MSN, Nursing, University of Texas at El Paso, 2003

DISSERTATION

Submitted in Partial Fulfillment of the  
Requirements for the Degree of

**Doctor of Philosophy**

**Nursing**

The University of New Mexico  
Albuquerque, New Mexico

**December 2013**

PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

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**DEDICATION**

In memoriam for LeRoy E. Halsey, my father.

He never wavered in his wholehearted support of my educational endeavors. He was always willing to support me emotionally, physically, and spiritually throughout my educational process as well as my life. My dad was always just a phone call away when I needed him. He was always there whether I had a skinned knee or a fight with my best friend. Thank you for being a great Dad! I still miss you every day.

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I heartily acknowledge Dr. Marie Lobo my advisor, dissertation chair, and friend for continuing to encourage me through my years in the classroom and the long months writing this dissertation. Her guidance and professional style will remain with me as I continue my career. I hope one day to be the high-caliber nursing educator she has proven herself to be.

I also thank my committee members Dr. Cindy Mendelson, Dr. Jean Giddens, and Dr. Pam Schultz for their valuable recommendations pertaining to this study and their assistance in my professional development.

To my husband Alan, I thank you not only for your emotional support but the heavy financial support you have given me throughout my MSN and PhD education. You never wavered in your support and even “kicked me in the behind” whenever I needed it. Thank you for your many hours proof reading the myriad of papers and this manuscript, even when you told me you didn’t understand the material in them. Your love, however, was the greatest gift of all.

**PERCEIVED SOCIAL SUPPORT AND FEMALE BACCALAUREATE  
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**Abstract**

Perceived social support has been shown to improve mental health, increase persistence, decrease stress, and decrease attrition in nursing students. A lack of it has been linked to increased dropout rates in nursing school. It is vital we identify methods of increasing perceived social support to reduce dropout rates in nursing programs. However, there is an absence of published research about social support in female baccalaureate nursing students. The purpose of this study was to examine the relationships between perceived social support, reciprocity, economic adequacy, marital status, marital satisfaction, and age in female baccalaureate nursing students. The participants were female students with ages ranging from 19 to 47 years, and two subsets were examined: “married” and “not married.” The two main methods for data analysis were linear regression and correlation. The measurement instruments used were the PRQ2000, the IPRI reciprocity subscale, the EAS, and the EMS. Economic adequacy was found to be very significant in relationship to perceived social support in both subsets and the overall sample. Marital satisfaction was also a better measure than married status when exploring perceived social support in married participants. There are many potential interventions that may improve social

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support in female nursing students such as working with university systems to improve financial assistance, encouraging nursing faculty to be more supportive, aiding students seeking part-time jobs in the healthcare field, and teaching students and family members how to utilize electronic means of communication to increase the levels of perceived social support.

*Key words:* perceived social support, reciprocity, economic adequacy, marital satisfaction, social support, baccalaureate nursing students

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## **Chapter 1**

### **Introduction**

There is evidence that increased levels of perceived social support reduce attrition and increase persistence in nursing students (Baccus, 1992; Glogowska, Young, & Lockyer, 2007; Gloria, Kurpius, Hamilton, & Wilson, 1999; Hegge, Melcher, & Williams, 1999; Kirkland, 1998; Marshall, 1989; Metz, Cech, Babcock, & Smith, 2011; Shelton, 2003; Welhan, 2000; Wells, 2007). Also, increased levels of social support improve mental health and reduce stress in nursing students (Gigliotti, 2004; Haack, 1988; Jensen, 2007; Luo & Wang, 2009; Mahat, 1998; Maville & Huerta, 1997; Montes-Berges & Augusto, 2007; Wells, 2007). Peer support, a type of social support, has been found important for nursing students in the clinical setting and helps improve student teaching as well as reduces anxiety (Aston & Molassiotis, 2003; Brown & Edelman, 2000). Furthermore, marital status has been found to play a noteworthy role in perceived social support (Beach, Fincham, Katz, & Bradbury, 1996; Ensel, 1986; Sarason, Pierce, & Sarason, 1990). These are significant findings and strengthen the need for understanding perceived social support in nursing students.

In addition, the number of university students over the age of 25 has been growing (Jacobs & King, 2002). In fact, in 2002, 25% of women were 25 years of age or older when they earned a bachelor's degree. This may have changed over time. (More recent studies about the age of students at the time of graduation were not located.) According to Jacobs and King (2002), older students are more likely to be married or divorced, to have children, and to have jobs outside of the university setting. Additionally, working requires time spent away from studies, as does parenting. The increase in age

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comes with the potential for higher numbers of married university students. Thus, the effect of marital status on perceived social support becomes evermore important.

However, there was no research in the literature on this topic. A better understanding of the impact of marital status on perceived social support may provide insight into specific problems faced by this student population. Indeed, faculty understanding of the impact of marital status on perceived social support may help to stimulate efforts to assist married as well as unmarried nursing students as they progress through baccalaureate nursing programs.

### **Background**

This section provides a very brief review of perceived social support. The buffering and moderating effects are considered and explained. Marital status, college students, and sources of social support are explored briefly. Social support for women and for nursing students is also looked at.

**Buffering and moderating effects of social support.** Social support has a “buffering” or protective effect (Brownell & Shumaker, 1984; Cassel, 1976; Cobb, 1976; Cohen, Gottlieb, & Underwood, 2001; Kaplan, Cassel, & Gore, 1977; Lin, Dean, & Ensel, 1981; Lin, Simeone, Ensel, & Kuo, 1979; Mueller, 2006). Buffering may be described as a response from others that assists in lowering stress levels. It may be as simple as a hug or an encouraging word. Cobb (1976) examined social support and stress in more detail and determined that social support not only accelerated healing, but it improved compliance with medical regimens. Caplan, in 1974, identified a support system consisting of the people who provide, what is now termed, social support. In addition, social support has been linked to proactive coping and increased determination of patients

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in physical rehabilitation (Greenglass & Fiskensbaum, 2009). Increased social support has significantly predicted improved health outcomes in older women as well (Janevic et al., 2004). Social support also provides health protection through a “moderating” effect (Dean, 1986; Dunkley, Blankenstein, & Halsall, 2000; Ensel, 1986; Spitzer, Bar-Tal, & Golander, 1995). While “buffering” has a direct effect, the “moderating effect” is indirect. Two examples are gender and economic status. Both gender and economic status affect all parts of life and indirectly affect the level of available social support.

**Marital status and social support.** In the past, it was assumed that being married afforded a higher level of social support (Acitelli, 1996; Janevic et al., 2004; Lin, Dumin, & Woelfel, 1986). Marital satisfaction also plays a role in the level of social support available within the marriage (Beach et al., 1996; Sarason, Pierce, et al., 1990). In marriage there exists a give and take, also called reciprocity (Antonucci, 1985; Antonucci & Akiyama, 1987; Antonucci & Jackson, 1990; Daniels & Guppy, 1997; Heany & Israel, 2002; Jacobson, 1986; Jung, 1984). Reciprocity requires that both partners support one another, that social support be a two-way street. Marriage may provide increased help with social support, or it may be a negative influence requiring one partner to give more social support than receiving it (Acitelli, 1996).

**Married women, college, and social support.** Lin, Dean, and Ensel (1981) found that married women reported higher levels of social support than single, divorced, separated, or widowed women. Additionally, Burke and Weir (1982) found that people usually seek support from their spouse first when they are faced with a stressful situation. In fact, spousal support may be a key component in decreasing stress levels when undertaking new projects (Cranford, 2004). On the other hand, women have been known

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to place family and marital choices over those of career (Fischer, Sollie, Sorell, & Green, 1989).

On a historical note, in 1981, Gottlieb found that married college students did not mention spouses when discussing social support. They did speak of social support in the community and with relatives other than their spouses. The more active they were in the community, the more social support they reported. Because these college students appeared to seek social support from sources other than their spouses, the question remains, how does marital status affect social support in female baccalaureate nursing students? This, however, must be taken with a note of caution as public attitudes and mores have changed since 1981; this may no longer be valid in today's world. More recent studies about this were not located in the literature search.

**College students and social support.** Social support has also been used to predict students' ability to adapt in a university setting (Valentiner, Holahan, & Moos, 1994). In addition, college students' academic success has been partially attributed to social support (Hilgendorf, 1997; Wilcox, 2007). Moreover, female college students with more social support reported less depression (Slack & Vaux, 1988). In college students, social support has predicted better health perceptions in women and fewer physical symptoms in men. (Hale, Hannum, & Espelage, 2005). Increased levels of social support have also predicted less stress in college students (Cohen, Mermelstein, Karmak, & Hoberman, 1985; Hale et al., 2005; Ruthig, Haynes, Stupnisky, & Perry, 2009). Higher levels of social support were even found to reduce smoking and alcohol abuse in African American students (Turner-Musa & Lipscomb, 2007).

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**Sources of social support for university students.** Family is the means of social support most often reported by university students (Cutrona, Cole, Colangelo, Assouline, & Russell, 1994; Gloria & Kurpius, 2001). In a study by Ohrt (2002), nursing students reported most of their social support came from their mothers. In another study, nursing students reported friends provided much of their social support (Olson, 2010). Also, Baccus (1992) reported that spouses, family, and friends were the major sources for social support in graduating nursing students. It appears that social support comes from many people with family and friends comprising the main source.

**Nursing students and social support.** Lower attrition in nursing students has been linked to higher levels of social support (Gloria, Kurpius, Hamilton, et al., 1999; Hegge et al., 1999; Marshall, 1989; Welhan, 2000). Even for disadvantaged nursing students, social support reduced attrition (Burris, 1990). Many studies have indicated that increased social support reduced stress and improved mental health in nursing students (Gigliotti, 2004; Haack, 1988; Jensen 2007; Luo & Wang, 2009; Mahat, 1998; Maville & Huerta, 1997; Montes-Burges & Augusto, 2007). Additionally, Kirkland (1998) reported that African American nursing students used social support as a major coping strategy. Social support for nursing students is an important mechanism for improving mental health and reducing stress levels.

### **Statement of the Problem**

There have been no published studies reporting the relationship between marital status and social support in female baccalaureate nursing students. Increased levels of social support have been linked to lower stress levels, lower attrition levels, better mental health, and higher persistence in nursing students. Social support has also been tied to

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marital status (Acitelli, 1996). In addition, in the past, marital status alone has been used as a primary measurement for social support (Acitelli, 1996; Janevic et al., 2004; Lin, Dumin, et al., 1986). Yet, it has been hypothesized that marital status has both a positive and negative influence on social support. Other studies have found that marital satisfaction played a role in the level of social support available within the marriage (Beach et al., 1996; Sarason, Pierce, et al., 1990).

What is the relationship between marital satisfaction and social support in married female baccalaureate nursing students? Much has been written about the importance of marital satisfaction when assessing social support, but there is no evidence that the findings pertain to female baccalaureate nursing students. This too, is an area missing from the published literature. Having further knowledge of the effect of marital status on social support in nursing students may lead to nursing educators' increased understanding of its impact and may help stimulate efforts to assist married as well as unmarried baccalaureate nursing students.

### **Purpose of the Study**

The purpose of this study was to examine the relationships between marital status, economic adequacy, age, and social support in a sample of female baccalaureate nursing students in the Southwestern United States. Moreover, reciprocity was considered to be a part of the overall concept of social support. The relationships between reciprocity, marital status, economic adequacy, and age in female baccalaureate nursing students were also examined. The study additionally explored the relationship between marital satisfaction and social support in married female baccalaureate nursing students, another area the literature had little information about. This research will facilitate our

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understanding of the dynamics between marital status, marital satisfaction, and perceived social support. Having further knowledge of the relationships between marital status, economic adequacy, age, and social support in nursing students will lead to nursing educators' increased understanding of the impact of marital status, economic adequacy, and age on social support in female baccalaureate nursing students. Ultimately, the information obtained will help the planning of future program changes to improve the success of female baccalaureate nursing students.

**The research questions.** What is the relationship of the independent variables (age, economic adequacy, and marital status) to perceived social support and the reciprocity inherent in social support between married and not married female baccalaureate nursing students? Does increased marital satisfaction correlate positively to increased levels of social support in married female baccalaureate nursing students?

### **Research Variables**

The variables selected for this study included two dependent variables and four independent variables. The dependent variables were 1) perceived social support, which was measured using Weinert's Personal Resource Questionnaire 2000 (PRQ2000) (Weinert, 2003) (see Appendix A) and 2) reciprocity as measured by Tilden's Interpersonal Resource Inventory (IPRI) reciprocity subscale (Tilden, Nelson, & May, 1990) (see Appendix B). The independent variables were 1) age at last birthday, 2) economic adequacy as measured by Lobo's Economic Adequacy Scale (Lobo, 1982) (see Appendix C), 3) marital status (married or not married), and 4) marital satisfaction as measured by the ENRICH Marital Satisfaction Scale (EMS) (Fowers & Olson, 1993) (see Appendix D).

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### **Hypotheses**

The following hypotheses were addressed in this study:

H1: Perceived social support as measured by the PRQ2000 is predicted by the independent variables marital status (married or not married), age, and economic adequacy as measured by the EAS in female baccalaureate nursing students.

H2: Reciprocity as measured by the IPRI reciprocity subscale is predicted by the independent variables marital status (married or not married), age, and economic adequacy as measured by the EAS in female baccalaureate nursing students.

H3: There is a positive association between social support as measured by the PRQ2000 and marital satisfaction as measured by the EMS in married female baccalaureate nursing students.

### **Research Design**

Descriptive surveys are designed to collect detailed data of existing variables, especially when little is known about them (LoBiondo-Wood & Haber, 2010). The information may then be examined to determine significant differences and to identify relationships among the variables. A descriptive survey design was chosen for this study. No research has previously been done on these specific variables in this combination on female baccalaureate nursing students that this study will be investigating.

## **Definitions**

### ***Social Support***

- Theoretical definition: “Social support is information leading a person to believe that he[/she] is cared for and loved, esteemed and valued, and that he[/she] belongs to a network of communicated and mutual obligations” (Cobb, 1976, p. 300).
- Operationalized using the PRQ2000 (Weinert, 2003).

### ***Reciprocity***

- Theoretical definition
  - “mutual obligation” (Cobb, 1976, p. 300).
- Operationalized using the IPRI reciprocity subscale (Tilden et al., 1990).

### ***Economic Adequacy***

- Theoretical definition
  - Economic resources are satisfactory to meet daily needs, such as rent/mortgage, food, healthcare, childcare, and so forth (Clingerman, Stuifbergen, & Becker, 2004).
- Operationalized using the EAS (Lobo, 1982).

### ***Marital Satisfaction***

- Theoretical definition
  - “an attitude of greater or lesser favorability toward one’s own marriage” (Roach, Frazier, & Bowden, 1981, p. 537).
- Operationalized using the EMS (Fowers & Olson, 1993).

### **Theoretical Framework**

A theory is a “set of interrelated concepts, definitions, and propositions that present a systematic view of phenomena for the purpose of explaining and making predictions about those phenomena” (Lobiondo-Wood & Haber, 2010, p. 58). Theory and research are integrated, and it is important to clearly define the theoretical framework in a study. The theoretical framework will guide the research process from determining the research questions through reviewing the relevant literature, selecting the data collection tools, analyzing and interpreting the data, and, finally, to discussing the findings and formulating conclusions.

Significance of a theory is the ability of the theory to generate useful knowledge (Bredow, 2004). Many studies using social support theory (SST) have provided new insight into nursing issues (Burke & Greenglass, 1999; Kevern & Webb, 2003). Utility defines the theory’s ability to generate research applicable to nursing (Bredow, 2004). Social support theory has been used to guide the study of nursing students (Hegge et al., 1999; Hilbert & Allen, 1985), college students (Cutrona et al., 1994; Malik, 2000), Hispanic and non-Hispanic college students (Bordes, Sand, Arredondo, Kurpius, & Rayle, 2006), caregivers of dementia patients (Rapp, Shumaker, Schmidt, Naughton, & Anderson, 1998), illness and health (Janevic et al., 2004; Lin, et al., 1979; Tilden & Weinert, 1987), mental health (Gigliotti, 2004), nursing job satisfaction (Norbeck, 1985), cancer (Bottomley & Jones, 1997), and pregnancy (Norbeck, Lindsey, & Carrieri, 1983). Social support theory has been used broadly throughout the social sciences. Empirical evidence of SST’s utility may be seen in the multitude of studies utilizing it.

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The two theories chosen to guide this research were SST (Schaffer, 2004) and equity theory (Stewart, 1989). Social support theory provided the major underpinnings for the research. It provided a basis for why social support is important. Social support theory postulates that people have a need for social support (Weiss, 1969). Needs for social support change over time, supporters are motivated to help, and the duration of support varies according to the need (Bordes et al., 2006; Janevic et al., 2004; Rapp et al., 1998; Tilden & Weinert, 1987).

Equity theory supports the concept of reciprocity, or the bi-directionality, that exists within social support (Stewart, 1989). Stewart (1989) wrote about equity theory, which postulates that 1) people attempt to maximize their outcomes, 2) groups attempt to maximize the collective reward, 3) people in inequitable relationships suffer distress, and 4) people in inequitable relationships attempt to restore equity. This implies that when social support becomes too one-sided in a relationship it causes distress. The persons within this inequitable relationship will attempt to rectify the inequities by returning social support to a more even level. Returning to equity is the missing piece in social support theory. Equity theory supports the bi-directionality, or reciprocity, of social support. This piece added to SST completed the theoretical framework necessary to guide this study.

This research study used Cobb's (1976) definition of social support to define the parameters for the SST. In addition to his definition of social support, he defined three major concepts of social support: emotional support, esteem support, and network support. Cobb's definition for emotional support was "information leading the subject to believe that he is cared for and loved" (p. 300). His definition for esteem support was

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“information leading the subject to believe that he is esteemed and valued” (p. 300).

Lastly, he defined the concept of network support as “information leading the subject to believe that he belongs to a network of communication and mutual obligation” (p. 300).

This last concept is two-fold. It directly relates to the concept of network support, but it also lends support to the concept of reciprocity with the inclusion of “mutual obligation.”

It is through the use of both social support theory and equity theory as well as the definitions used by Cobb (1976) that a clear picture of the theoretical framework was visualized for this study. It became evident that social support acts as a prop with emotional support, esteem support, network support, and reciprocity buoying the person or supporting them. Reciprocity, however, has a two-direction flow of energy and causes the person to become off balance if energy flows in one direction at a level that is too high. Outside influences include age, economic adequacy, gender, and marital status. Gender affects economic adequacy, and age has a reciprocal effect on economic adequacy. Both affect social support. Economic adequacy has a reciprocal effect on marital status and affects social support. One can't have marital satisfaction unless married, so marital status is filtered through marital satisfaction, if married. Marital status affects social support directly, if not married. (See a figure depicting the theoretical framework in Appendix E).

### **Summary**

When reviewing the background of social support, it became evident that perceived social support impacts mental health and persistence in nursing students, which also affects attrition and stress levels. Improved mental health is an important aspect in anyone's life, and it is worth finding ways to improve it. Reducing stress is also a

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valuable tool. In nursing students, increasing persistence and reducing attrition will help improve graduation rates. What's more, marital status appears to have an effect on perceived social support. However, the effect for nursing students has yet to be explored.

Chapter 1 gave a brief overview of social support and the research design. It provided the problem statement, variables, hypotheses, definitions, and theoretical framework. Chapter 2 provides an in-depth review of the literature for social support and Chapter 3 presents the methods that were used in this study with a more in-depth look at the research design.

## **Chapter 2**

### **Literature Review**

This literature review focuses on areas of social support that are specific to this research. It includes studies about social support and marital status, social support and age, as well as social support and economic adequacy. It also includes studies about social support and college students, nursing students, and gender. Additionally, it explores the conflict or reciprocity generated by social support. A section about marital status and nursing students is also included. All of these areas were important to serve as background for developing the study, which examined the relationship between marital status, age, and economic adequacy with social support and reciprocity in female baccalaureate nursing students. This study, also, examined the relationship between perceived social support and marital satisfaction in married female baccalaureate nursing students.

A brief history of social support research is presented with an overview of social support research in the social sciences. This allows readers to familiarize themselves with the myriad of ways social support impacts everyday lives. During the review of literature, it was found that a single concise definition for social support did not exist. This posed difficulties for the development of this research. Upon further review, a definition for social support was chosen. In addition, definitions for the terms involved in social support were selected for this study.

It was difficult to obtain current articles dealing with the subject of the effect of marital status on perceived social support in female baccalaureate nursing students. In order to properly cover the subject in the literature review, articles published previous to

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the last decade were utilized. Multiple searches were conducted using the search terms “social support” plus “marital status” plus “nursing students.” A search in CINAHL Plus with full text resulted in 21 articles. Six of these were about foreign nursing students and were not useful. One was about men in nursing. One was about psychometric testing of a new measurement tool. Twelve were doctoral dissertations. Of these, five were found to have research pertinent to the proposal. However, only three were written in the last decade. A search in Health Source Nursing/Academic Edition identified 54 potential articles. Some were duplicates of the CINAHL search, and many were foreign. Some were about parenting or adolescents. Of the 54, only two were found to be pertinent, and, of these, only one was written in the last decade.

A search in PUB Med resulted in 14 articles. Of these, five were about foreign students, four about pediatrics, three about adolescents, one about challenge examinations in a nursing program, and one about stereotypes. None were found to be pertinent. Educational Resources Information Center (ERIC) was also searched. This resulted in no studies. PsychINFO was searched with three articles resulting. Two were foreign and one was about acculturation and not useful. In addition, a search was conducted in JSTOR using the terms “marital status” and “social support.”

Changing the terms to “social support” plus “marital status” plus “college students” in the above databases broadened the search. This yielded slightly more studies. However, these studies were still dated. Reviewing all the found pertinent literature yielded dated but valuable articles. Reading the pertinent literature led to further searches for the following terms: “social support” plus “marital status,” “social support” plus “reciprocity,” “social support” plus “age,” “social support” plus “gender,” “social support”

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plus “economic adequacy,” and “social support” plus “marital satisfaction.” This difficulty to obtain literature points to the lack of research about social support and marital status in female baccalaureate nursing students.

### **Definitions of Social Support**

Tilden (1985) stated that numerous definitions for social support have been developed yet none completely define the concept. In 1985, House and Kahn defined social support by the functional content of relationships. Kahn and Antonucci (1980) defined these relationships using a social network consisting of spouse and close family members as well as more distant neighbors and co-workers. Social support has also been labeled a metaconstruct and not a concept (Vaux, 1985, 1987, 1990). Vaux defined the meta construct of social support as having three aspects: resources, behaviors, and subjective appraisals. Furthermore, he concluded that these aspects are actually concepts, and they are logical components of social support. Bottomley and Jones (1997) called social support a multidimensional construct. Social support has also been called a “construct with multiple dimensions” (Sarason & Sarason, 2009, p. 113). Labeling social support as a concept, a meta construct, a construct with multiple dimensions, a multidimensional construct, or simply a combination of several concepts creates an even bigger challenge for developing a definition. However, a clear operationalized definition of social support was necessary as was a theoretical framework to guide this research; otherwise, it would have been easy to loose track of the research goal.

Social support has also been defined as “an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient” (Shumaker & Brownell, 1984, p. 11). The key term in this

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definition is “perceived.” It is the perception of the recipient or provider that determines social support. For the purpose of this study, when the term social support was used it was perceived social support that was being considered.

Tilden (1986) added that nursing is a type of social support and that it is a “shared” not a “borrowed” type of knowledge. Lin et al. (1979) used the definition “support accessible to an individual through social ties to other individuals, groups, and the larger community” (p. 109). While these definitions carry similar threads of resources that are shared or exchanged, they are unique and express differences in the way the resources are viewed and parceled out.

Cobb (1976) developed a working definition of social support that served quite well for guiding this research: “Social support is information leading a person to believe that he[/she] is cared for and loved, esteemed and valued, and that he[/she] belongs to a network of communicated and mutual obligations” (p. 300). It was Cobb who emphasized the idea of social support acting as a buffer for stress. Cobb included the idea that social support may have a negative impact in addition to a positive one. He termed this mutual obligation. Cobb’s definition incorporated the reciprocity inherent in social support by including the concept of mutual obligations. These mutual obligations occur within the network of support he postulated is present in all relationships.

Cobb (1976) listed three classes of social support: emotional support, esteem support, and network support. Cobb defined emotional support as “information leading the subject to believe that he is cared for and loved,” esteem support as “information leading the subject to believe that he is esteemed and valued,” and network support as “information leading the subject to believe that he belongs to a network of

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communication and mutual obligation” (p. 300). Esteem and emotional support he deemed as the intangible or difficult-to-measure aspects of social support. Completely tangible or measureable aspects of social support he defined as supportive behaviors, and these include actions such as giving advice, money, time, and guidance. These were supplementary theoretical definitions that were utilized in this study. They helped to support the theoretical framework.

### **A Historical View of Social Support in the Social Sciences**

When studying suicide in the late 1800s, Durkheim (1979) first examined the importance of social ties, defined as family, friends, and organized religion. Durkheim is credited with being the “father of sociology” and published a number of sociological articles (Vaux, 1988). He discovered a link between decreased social ties with increased rates of suicide. He also linked social ties to what is now referred to as social support.

In addition, social support appears to have taken the place of the following terms: “caring, friendship, community cohesion, and unconditional regard” (Tilden, 1985, p. 1999). Social network was a term also used before social support (Cobb, 1982; Weinert, 2003). Some refer to the informal groups of persons surrounding each of us as social networks and social support (Gottlieb, 1985; Gottlieb & Bergen, 2010). All of these terms indicate a wide umbrella under which research on social support has taken place. This puzzling mishmash of terms has led to more confusion among researchers. Part of the problem in defining social support may lie in the numerous aspects of social support that exist.

In 1969, Robert Weiss wrote about “the fund of sociability.” He was trying to identify why people needed relationships. What did they provide? Are several intense

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relationships as good as many mundane ones? He began with a study of six couples, 12 people, all who had recently moved to the suburbs of a large city hundreds of miles away from their previous homes. He noted that four of the six wives became unhappy right after the move. The two wives who did not become unhappy found jobs outside the home immediately after moving. This instilled the idea that social support may have decreased depression in Weiss's studies. The idea that social support decreases the signs and symptoms of depression is still true in the early 21<sup>st</sup> century.

Ultimately, Weiss (1969) determined there are five different types of relationships, all of which he deemed necessary. First there is "intimacy," which prevents a person from feeling alone. Typically, intimacy is fulfilled by the spouse or partner relationship. Next is "social integration." A friend or coworker fits this relationship. "Opportunity for nurturant behavior" is the next type; an example is the parent-child connection. Also, there is "reassurance of worth." This relationship contains esteem for each other. Finally, there is "assistance." Assistance is when someone offers resources not limited by time or breadth constraints; an example is family relationships. In addition, Weiss found that one type of relationship did not take the place of another.

He also used the terms "feel comfortable," and "sense of security," which dovetail with later definitions of social support. Weiss's research was conducted over 40 years ago and the cultural norms about marriage and partners, or significant others, have changed in society. Yet, the underlying concept of support for each other in a relationship remains the same today, regardless of the type of "couple" that exists.

Weinert (2003), while conducting a factor analysis of the Personal Resource Questionnaire 2000, found a three-factor solution. Factor 1 included three items: one for

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intimacy, one for social integration, and one for reassurance of worth. Factor 2 included one item that represented nurturance, one for social integration, and three for reassurance of worth. Factor 3 was composed of three items for social integration and two for assistance. Factor 1 could be said to represent intimacy more strongly than the other factors – Factor 2 (reassurance of worth) and Factor 3 (social integration).

The three classes of support defined by Cobb (1976) align with the three factors found by Weinert (2003). Emotional support is likened to intimacy, esteem support to reassurance of worth, and network support to social integration. This strengthens the assumption of the three classes upon which the definition of social support was built. It adds credence to the selection of Cobb's definitions as a guide to this study and to the selection of the PRQ2000 as the tool to measure perceived social support.

Social support was found to be important during times of stress (Brownell & Shumaker, 1984). Cassel (1976) looked at, what was called, social feedback. He found that individuals who exhibited poor social feedback had a higher propensity for disease. Social feedback was a major part of what he called social support. This is an example of the buffering theory about social support, which states that the feedback from others around us assists in lowering stress levels (buffering). In other words, people's responses may help to limit negative effects. An encouraging word or a hug could be interpreted as buffering. There is evidence to support the stress-buffering model of social support (Cobb, 1976; Cohen, Gottlieb et al., 2001; Kaplan et al., 1977; Lin et al., 1981; Lin, Simeone et al., 1979; Mueller, 2006).

Caplan (1974) incorporated some of Cassel's ideas into his work in the mental health community during the 1960s. However, the term he used was "support system."

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Caplan discussed three major areas that comprise the support system: 1) helping with the psychological issues or intangible aspects of support, 2) sharing responsibilities, and 3) providing technical skills, money, or guidance. Caplan also included the role of formal healthcare caregivers in this support system. Pearson (1986) found additional evidence that social support helps maintain healthy emotional status and aids in handling daily stress. Hupcey (1998) raised an interesting question: Does the lack of social support cause depression, or does depression result because of a lack of social support? Cause and effect has still not been determined where social support is concerned.

Cobb (1976) looked at the relationship between social support, stress, and health. He found that social support aided people's ability to respond to stress in everyday life, in addition to helping people meet their social needs. He emphasized the importance of social relationships to help alleviate and/or prevent health issues. It was this idea that social support helped buffer a person from stress that underpinned his early research. In 1995, Cobb determined that social support, while accelerating healing and improving compliance with medical regimens, did not relieve the effects of chronic stress on the body. This "buffering" aspect in response to stress continues to make the study of social support important today.

Indirect actions to alleviate potential problems (or what is called the moderating effect) are another mechanism through which social support is thought to be helpful (Dean, 1986; Ensel, 1986). Moderating is not as direct as buffering. Dunkley et al. (2000) found evidence supporting the moderating effect of social support between people's feelings. Social support can reduce stress through moderating control (Spitzer et al., 1995). The moderating effect is also important in helping people cope with higher

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levels of stress in their day-to-day lives. Both of these effects, buffering and moderating, are important concepts in the literature about social support. They offer further validation that social support is an important part of our everyday lives, helping us to deal with stress and possibly alleviating potential health issues. However, a person must first seek social support in order to be able to find it (Rapp et al., 1998). Jung (1984) wondered if there must be a belief in social support before it can be accepted. These are important points. If people do not look for social support and do not believe in social support, then they may not find social support helpful, leading to less healthy states and higher levels of stress.

### **Research Involving Social Support and Marital Status**

What is the link between marital status and social support? There is considerable research in this area. However, when attempting to separate marital status from social support, the results are conflicting. In the past, marital status has been used as a primary measurement for social support (Acitelli, 1996; Lin, Dumin, et al., 1986). Some researchers have assumed that marriage itself equated to increased levels of social support (Janevic et al., 2004). Indeed, Ensel (1986), when exploring depression, social support, life events, and marital status, found that married persons, both men and women, had higher reported social support than separated, never married, widowed, or divorced persons.

Lin, Dumin, et al. (1986) argued that marital status was an improper measurement, as social support is comprised of much more than being married or not married. It would seem the quality of the marriage does, indeed, affect the social support given to the spouse and vice versa (Sarason, Pierce, et al., 1990). Partners with negative self-images

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in a marriage may be less apt to provide support and more apt to provide negative responses that lead to conflict in the relationship (Beach et al., 1996).

In addition, the bidirectionality of social support must be considered in marriage and partnerships (Antonucci, 1985; Antonucci & Akiyama, 1987; Antonucci & Jackson, 1990; Daniels & Guppy, 1997; Heany & Israel, 2002; Jacobson, 1986; Jung, 1984).

While being married or in a partnership may carry an inherent source of social support, it may also create obligations to provide social support. During a time of stress when a married student feels effort needs to be applied to educational endeavors the obligations of marriage may interfere with school.

Actually, marriage is but one aspect of social support and may be negative or positive in nature (Acitelli, 1996). Marriages cannot be assumed to provide support. It depends on the interaction between the marital partners. Additionally, men and women may have different views of marriage. Older adults may perceive support from a marital partner as more important than younger adults. These differences need to be taken into consideration when evaluating marital satisfaction. In one study it was found that women sought social support more often than men in marriage (Day & Livingstone, 2003). Another study found that husbands' support was important for women managing multiple roles (Hirsch, Engel-Levy, & DuBois, 1990). One could say that women find social support more important than men do and seek it more often, with married women seeking higher levels of support than married men (Turner & Marino, 1994).

Marriage may also protect health in marital partners (Ren, 1997). Marital status was found to enhance the buffering effect of social support and reduce psychiatric symptomology (Lin, Simeone, et al., 1979). Furthermore, marital status was found to

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have a positive and indirect or mediating effect on mental health in those with chronic illness (Sherbourne & Hays, 1990). On the other hand, other studies have shown that marriage does not protect against psychiatric illness (Roberts, Roberts, & Stevenson, 1982).

What's more, it has been found that decreased social support decreases problem-solving capabilities in newlyweds (Sullivan, Pasch, Johnson, & Bradbury, 2010). One study stated that similar persons make the best supporters, and that, perhaps, marital partners share similarities (Suitor, Pillemer, & Keeton, 1995). This may account for some studies showing higher levels of social support in married persons than in single persons.

It is interesting to note that women report higher levels of social support than men do, and married persons report more support than unmarried persons (Turner & Marino, 1994). In addition, another study found that married persons reported larger social networks than unmarried persons (Gerstel, Riessman, & Rosenfeild, 1985). Perhaps the marital bond makes social support more easily available, and women may be more apt to seek it than do their male counterparts.

Vaux (1988) claimed that Lin, Dean, and Ensel have conducted the most extensive research into social support, marital status, and depression. In their research, five different marital states were examined: married, divorced, separated, widowed, and single (Ensel, 1986; Lin, Dumin, et al., 1986). They found that married women and men reported the highest levels of social support, and divorced persons reported the lowest levels of social support. Single, widowed, and separated people all reported moderate levels of social support. It may hold true that married nursing students have higher levels

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of social support from their spouses. However, without further research, no one can say for certain whether the same phenomenon Vaux found exists in married nursing students.

Ensel (1986) stated that social support mediates the effects of life events on depression in married men and women. He also noted that divorced men and women reported the lowest level of social support. However, he found no gender differences in actual social support and speculated that this is probably due to mediating effects on interactions when social support is being measured. Furthermore, Ensel cautioned that the effect of marital status on social support couldn't be considered universal. Every marriage differs in its ability to provide support, and one should not assume social support and marriage are related, but one can't be considered a measurement for the other. In fact, over time, both are dynamic and change as people support exists impartially just because marriage exists. The quality of the marriage will vary over time; thus, the quality and amount of social support will also vary (Dean, 1986). change and grow.

Norbeck (1985) studied social support networks in nurses working in high acuity areas. She found that married nurses listed their significant other as well as family members, but fewer friends, as sources of social support than unmarried nurses. She also found that the higher the level of social support, the lower the perceived job stress level. In unmarried nurses, support from relatives was found to be a large part of their network and considered more valuable. Another study showed higher job satisfaction with spousal support (Hirsch et al., 1990). Burke and Greenglass (1999) reported that support from a spouse reduced job-related stress. AbuAIRub (2004) has also linked increased social support to improved job performance.

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Conversely, work stress may cause a decrease in support from others (House, 1981). This may be due to the lack of time spent with other people or lack of desire to see others when stress levels are high. It appears that social support from a spouse is important in the work setting. This may be due to the finding that social support is an asset when frustrating tasks are at hand (Sarason, Levine, Basham, & Sarason, 1983). If you compare attending a university to having a job, then social support can be said to be equally important in the educational setting.

Burke and Weir (1982) found that people usually sought support from their spouse first, when faced with a stressful situation. Spousal support may be a key component in decreasing stress levels when undertaking new projects (Cranford, 2004). On the other hand, women have been known to place family and marital choices over those of career (Fischer et al., 1989). It appears that spousal support is not only sought first, but may be key in helping to reduce stress. It is interesting to note that Gottlieb (1981) found that married college students did not mention spouses when discussing social support. They did speak of social support in the community and with other relatives. The more active they were in the community, the more social support they reported. The sample consisted of 30 women and 30 men, with an average marriage of 3.5 years and an average age of 25.5 years. All lived in student housing, shared common issues, and supported each other. This communal living style might have accounted for the responses.

Wilcox (1981) linked divorce and separation to increased psychological, physical, and behavioral problems in college students. Once again, this ties social support to possible academic success (or lack of success) in college students. Scott and King (1985)

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found that married women in college with children were only able to maintain their social support from others if they maintained their pre-education level of care for their spouse and children. It is easier for men to return to college than women (Huston-Hoburg & Strange, 1986). However, these studies were dated, and this may no longer be valid in today's educational world. Yet, if it holds some truth, then married women are still at a disadvantage when returning to college. Moreover, single women with children face childcare issues as well (Kevern & Webb, 2003). All of these issues make going to college more of a challenge for the married woman and those with children.

### **Research Involving Social Support and College Students**

There is overlap between studies about marital status and social support and college students and social support. However, in structuring this literature review, studies have only been included in one area to avoid redundancy. Married college students were covered under marital status and social support. This section reviews the literature specific to college or university students and social support with respect to academic success, better health, reduced stress levels, peer relationships, and family support.

**Academic success and social support in college students.** Wilcox (2007) stated that social support might, in fact, be the “cornerstone of affective outcomes for college students” (p. 36). College students who have reported greater “cohesion” among their peers also reported greater academic success (Hilgendorf, 1997). If cohesion can be likened to social support, then increased social support would lead to greater academic success. Also, first year college students were reported to utilize proactive coping more frequently with higher levels of social support (Greenglass & Fiskensbaum, 2009). One study found that social support moderated depression in female college students after

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undesirable life events (Slack & Vaux, 1988). In addition, it was found in another study that the number of college students over the age of 25 is increasing, and this places them at a disadvantage for completion of their degree (Jacobs & King, 2002). In this instance, it would seem that social support again would be important.

**Reduced stress, reduced illness, better health in college students with high levels of social support.** High levels of social support were also linked to lower levels of stress in college students, in a longitudinal study of first year college students by Ruthig et al. (2009). Stress was measured by cumulative grades and commitment to education at the end of the year. College students with high social support were found to have lower perceived stress levels and fewer physical symptoms of illness (Cohen, Mermelstein et al., 1985). Moreover, a sense of belonging was related to a better perception of health for women and fewer illness symptoms in male college students when Hale et al. (2005) conducted a study of 247 college students. Additionally, social support was shown to buffer African American college students from smoking and alcohol use (Turner-Musa & Lipscomb, 2007).

**Peer relationships and social support in college students.** It would appear that peer relationships or peer support at the college level is an important source for social support. Furthermore, when tutors develop a social relationship with college students the students remain in college longer (Malik, 2000). As tutors develop this relationship they become part of the students' social support. In one study, a higher level of social support was positively correlated to longevity and persistence in 98 African American undergraduate college students on a predominantly white campus (Gloria, Kurpius, Hamilton, et al., 1999).

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**Family support and college students.** In addition, family support was found to be important for college students coping with events that were beyond their control (Valentier et al., 1994). Gloria and Kurpius (2001) found social support was negatively related to non-persistence in American Indian college students. The variables explored were family support, friend support, and the perception of being mentored. The level of parental social support also was used to predict grade point average (Cutrona et al., 1994). It was found that parental support was far more predictive than support from friends or romantic partners.

Social support from many different sources has helped college students cope, especially with events beyond their control. The better the social support, the longer the student remained in college and the better their outlook for success (Valentier et al., 1994). In addition, social support from family, friends, and peers helped improve health, reduce stress, improve persistence and longevity in college, and improved grades in college in white, African American, and American Indian college students (Gloria et al., 2001; Gloria et al., 1999; Kirkland, 1998; Marshall, 1989). Social support also offered some buffering qualities against smoking and drinking for African American college students. Providing social support appears to be an important factor for helping college students, in general.

### **Research Involving Social Support and Nursing Students**

This research study focused on female baccalaureate nursing students, so the literature review would not have been complete without exploring existing research on social support and nursing students. Stewart and Tilden (1995) stated that social support has been researched a great deal by nurses, and this research has provided valuable

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information. Nevertheless, there is a great deal yet to be learned. In 1994, O'Reilly-Knapp reported that nursing students desired more social support than they received. Even nursing students with learning disabilities stated that social support from family members was important to their continuing education (Kolanko, 2003). Knowing that social support is important to nursing students, it would seem that the more we can learn about it, the better we can develop methods to enhance this valuable commodity.

**Academic success and social support in nursing students.** Research on nursing students and social support is prevalent. However, research specific to nursing students' academic achievement and social support is scarce in the literature. In 1985, Hilbert and Allen studied the effect of social support on educational outcomes. The study included nursing students at a private university. Social support was found to have no relation to academic achievement for these students. However, a difference between social support and gender was noted.

Ohrt (2002) studied the use of social support by baccalaureate nursing students. This study was comprised of baccalaureate nursing students, white females 20-23 years of age. Interviews were the main source of data collection. Mothers were identified as the most important source for emotional support. Relationships between faculty and students were found to be another basic source of support. It is interesting to note that the spousal relationship as a source of support was not explored in either of these studies.

Laibach, in 2006, studied social support in associate degree nursing students. The purpose of the study was to investigate student attitudes toward five dimensions of social support to determine if any were related to academic success. The dimensions studied were "intimacy, social affirmation, personal support, faculty support, and peer support"

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(pp. 4-5). Social support was defined as, “a person’s perception of whether and to what extent an interaction or relationship is helpful” (p. 6). No relationship was found between any of the dimensions of social support and academic achievement, supporting the results of Hilbert and Allen’s 1985 research. Social support is just one small aspect of academic success. It is possible that social support does, in fact, have an effect on academic success, but the effect might have been too small to be seen in this study.

**Attrition and persistence linked to social support in nursing students.** While researching persistence in baccalaureate nursing students, Welhan (2000) found that social support from family, in particular from parents, played a major role in persistence in nursing school. She did not look at marital status or the support of spouses in her study. In a qualitative study including ten baccalaureate nursing students, Olson (2010) found that support from friends was the most reported form of perceived social support. Early identification of social support for baccalaureate nursing students has been shown to affect their persistence in nursing school in a study by Hegge et al. (1999). They also found that a lack of social support was negatively correlated to completion of the baccalaureate nursing program. Students who reported higher social support in the form of emotional, informational, and tangible support were more likely to remain in nursing school (Marshall, 1989). Burriss (1990) reported that peer support decreased attrition rates in disadvantaged nursing students. Baccus (1992) found that graduating nursing students had more social support from spouses, family, friends, and bosses than a subsequent dropout group from nursing school.

In 2008, Metz et al. determined that Native American nursing students equated higher levels of social support with success as measured by identification with nursing

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and nurses. Gloria, Kurpius, Hamilton, et al. (1999) found that social support reduced attrition in African American nursing students. Kirkland (1998) also found that African American nursing students used social support as a major coping strategy. Furthermore, social support in the form of family and friends strongly predicted persistence in African American baccalaureate nursing students. Increased social support at nursing schools hopefully will reduce attrition and increase student persistence.

**Faculty support, attrition, and nursing students.** Poor faculty support was additionally implicated in attrition for nursing students, and positive faculty support was linked to reduced stress in a study conducted by Wells (2007). In 2007, Glogowska et al. reported that the lack of social support was a major reason nursing students drop out of nursing school. One study stated that nursing student retention would increase if faculty provided more social support in the form of a caring attitude (Shelton, 2003). It is becoming clearer that social support is not only an integral part of assisting nursing students to cope with nursing school but also may be essential in reducing attrition in nursing education.

**Stress, mental health, and social support in nursing students.** Maville and Huerta (1997) stated that nursing school induced stress in nursing students, and students with lower levels of social support displayed poorer performance in nursing school. Peer support is but one aspect of social support, and it is an important one, but support from family is also crucial. Gigliotti (2004) found that support from husbands and children reduced maternal student role stress in nursing students. In a study of 92 baccalaureate nursing students, Jensen (2007) found a negative relationship between distress and social support. The more social support that was present, the lower the distress level reported by

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the nursing students. On the other hand, no significant relationship was found between perceived social support and stress in these same students.

Montes-Berges and Augusto (2007) found that nursing students with more social support reported better mental health. Additionally, Luo and Wang (2009) found a need for strengthening social support to better support nursing students' mental health. In addition, Haack (1988) found a lack of social support placed nursing students at a higher risk for depression. Since depression might lead to poorer performance and, perhaps attrition, social support becomes even more valuable.

Luo and Wang (2009) reported that social support was an important factor in helping nursing students cope with stress during baccalaureate nursing education. Jensen, in 2007, found BSN students who reported higher levels of social support also reported lower levels of stress in the clinical learning environment in nursing school. Mahat, in 1998, reported that if social support was present, nursing students reported decreased stress levels in the clinical setting. Conversely, Pagana (1990) failed to find a negative correlation between social support and perceived threat in nursing students in the clinical setting. However, perceived threat may not have been interpreted the same as stress. Perceived threat is likely much more complex than stress and may require more than social support to help relieve its presence.

**Peer support in nursing students.** Social support can be gained through students supporting students. Aston and Molassiotis (2003) found that peer support reduced stress levels in nursing students. Since peer support is a part of social support, social support can be said to have reduced stress levels in nursing students. In 2000, Brown and Edelmann found that nursing students reported using family and friends for emotional

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support more than they used their professors. All of the available contacts in a nursing student's social network appeared to be primary sources of social support. Alternatively, Kevern and Webb (2003) stated that older women in nursing school might have childcare issues, complicating their ability to study with other students. Thus, the older female nursing student may lack peer support and may be less available for social support.

### **Research Involving Social Support and Reciprocity**

It was not possible to consider this literature review complete without exploring the research on both the positive and negative effects of social support. Sarason and Sarason (2009) wrote of the bidirectionality of social support. This has also been referred to as reciprocity and could be considered a "double edged sword" (Cobb, 1976; Heany & Israel, 2002; Jacobson, 1986; Jung, 1984; Sarason & Sarason, 2009; Shumaker & Brownell, 1984; Tilden, 1986). The idea of reciprocity maintains that if one receives support, then one offers support in return (Sarason & Sarason, 2009). A person both receives and gives social support in any relationship. Reciprocity is present in differing degrees in any relationship that includes support (Antonucci, 1985; Antonucci & Akiyama, 1987).

Social support both helps and hinders (Cobb, 1976; Heany & Israel, 2002; Jacobson, 1986; Jung, 1984; Shumaker & Brownell, 1984; Tilden, 1986). Daniels and Guppy (1997) referred to this helping and hindering as reciprocity. Additionally, the degree or amount of give and take within a relationship, including the social support relationship, depends on the ethnic and socioeconomic status of a person (Antonuci & Jackson, 1990). It is important to consider this positive and negative aspect of social support when measuring for it. As social support requires a give and take, the person

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benefitting from the support will need to consider at some point that they will need to return the support.

Stewart (1989) wrote of “equity” theory, which asserts that people in inequitable relationships suffer distress and will attempt to restore the equity. When a person “owes” support they are placed in a position of inequality, and this creates distress. This implies that when social support becomes too one-sided, the people within the relationship will attempt to rectify it by returning the social support to a more equitable level between the two. Tilden (1985) exposed the positive and negative aspects of social support. Indeed, the Interpersonal Relationship Inventory (IPRI), developed by Tilden, has subscales to measure social support (the positive aspect) and conflict (the negative aspect) as well as reciprocity (the bidirectionality). Research by Tilden and Weinert (1987) supported the view that both negative and positive aspects of social support exist.

### **Research Involving Social Support and Age**

It would seem that age affects everything in our lives and social support levels are no exception. At different stages in life, people identify a group of persons who comprise their social network (Vaux, 1988). As a person grows older some of the people in this network are consistent and some change. There is research that shows differences in levels of support based on age (Lin, Dumin, et al., 1986; Turner & Marino, 1994). This might be related to the changing needs people have as they age. Turner and Marino (1994) found that people 18 to 25 years of age had the least amount of social support, 26 to 34 years of age had a moderate amount of social support, and 35 to 45 years of age had the most social support. This study showed a difference among age groups in expected social support levels. However, Siebert, Mutran, and Reitzes (1999) found that as we

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grow old, we become less able to assist others in our social networks. Elderly people become less likely to seek support from those in their social network since they are less able to return the support. Thus, as we age we have less social support in our lives. In addition, fewer older adults have a partner, and they experience less reciprocity in their relationships than do younger adults (Antonucci & Jackson, 1990).

Lin, Dumin, et al. (1986) also found significant differences between age and levels of social support. They found that from the ages of 18 through the mid-20s social support increased. However, from the mid-20s through the early 30s social support decreased. From the early 30s and up, as age increased so did social support. In the 50s this increase in social support slowed and then peaked in the late 60s. This study disagrees with other studies that state that older people display less social support.

The research is conflicting about when and what changes in social support levels occur at different ages. Nevertheless, one consistency in all of the studies is a difference in social support levels between the age groups. Therefore, it was important to take into consideration age when researching the effect of marital status on social support in this study.

### **Research Involving Social Support and Socioeconomic Status or Economic**

#### **Adequacy**

Socioeconomic status affects many aspects of our daily lives, including social support. Turner and Marino (1994) found that persons with low socioeconomic status reported less access to social support, and those with higher socioeconomic status reported more access to social support. Sherbourne and Hays (1990) found a correlation between socioeconomic status and the perception of social support. Those with higher

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socioeconomic status perceived more social support in their lives than those with lower socioeconomic status. Persons with a lower socioeconomic status reported more social support if they had larger numbers of people in their social support network, and those in a higher socioeconomic status reported more social support, with fewer numbers of people in their social support system (Hirsch et al., 1990).

Changes in economic status following a divorce or separation add to a person's stress by altering the availability of social support (Wilcox, 1981). This assumes the economic changes are detrimental. However, Lin, Dumin, et al. (1986) did not find differences in social support when evaluating four different socioeconomic groups. In spite of this, a majority of the studies do show a difference in the level of available social support depending on economic status. It may be assumed that any change that leads to lower income or income insufficient to meet daily needs (economic adequacy) also leads to a lower availability of social support. It may be that economic adequacy is more important than just socioeconomic status. It would seem the ability to meet daily and monthly economic needs would relieve the stress of seeking additional income and allow for more time and energy to be spent seeking and returning social support.

### **Research Involving Social Support and Gender**

While this research study did not include both genders, the literature about social support and gender differences was reviewed. This was done to support the decision to include only women in the study. Vaux (1988) reported that both genders with high support and low stress reported less depression than those with low support and high stress levels. However, women found problems more stressful than did men and sought social support more frequently from their significant others and friends than men did

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(Day & Livingstone, 2003). Burda, Vaux, and Schill (1984) found that female college students had a greater number of sources and more varied sources for social support than did male college students. One study implied that social support sources that influence women might not have the same influence on men (Cohen & Wills, 1985). There are differences in social support needs between the genders. It is clear that men and women respond to, seek, and desire social support differently.

### **A Look at Married Women and Nursing Education as It May Apply to Social Support**

While the focus of this research was the relationship between marital status, economic adequacy, and age with perceived social support in female baccalaureate nursing students, it was important to briefly review the literature on married women and nursing education. Marital status was, after all, a major factor in this study and female nursing students were the focus. The current literature was investigated to see if there were any links between married female nursing students and social support.

Eagle (1982) reported that married women dropped out of nursing school more frequently than single women did, with Hispanic women having the highest dropout rate.

This study was conducted among associate degree nursing (ADN) students, not baccalaureate nursing students, and was dated. However, the findings should be considered. Conversely, Frerichs, in 1973, found that married and older women had higher GPAs than did their younger or single counterparts in an ADN program. In 1981, Yess found that married women in an ADN program had higher graduation rates than single women did. It was also found that dysfunction within a marriage increased the stress levels in baccalaureate nursing students (Pasch & Bradbury, 1998). So, if marital

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discord was not accounted for, this might partially explain the differences seen between the studies. There might have been unidentified confounding variables that could have accounted for the differences. On the other hand, peer support was found to buffer the negative effects of marital discord (Mueller, 2006). None of these studies looked at social support. Nonetheless, they offer interesting insights into marital status and nursing education in women.

### **Theories of Social Support**

Without a theory or framework to guide this research it would have become easy to stray off the intended path, nullifying the results. The two theories chosen to guide this research were social support theory (SST) (Schaffer, 2004) and equity theory (Stewart, 1989). Social support theory provided the major bones for the framework, and equity theory added the piece to support reciprocity, or the bidirectionality, inherent in social support.

**Social support theory (SST).** Social support theory (SST) is a middle range theory and “addresses structure and interaction in relationships” (Schaffer, 2004, p. 180). It is important to note that the concept of social support has no clear definition nor has it been operationalized in SST. Descriptions of the theory have tried to deal with the multiple definitions, but clarity is still lacking. Social support theory addresses perceived social support, or the perception that one is being supported, in addition to the actual physical actions comprising social support. Social support theory does, however, state the main components clearly. These components are appraisal support, emotional support, formal support, informal support, informational support, instrumental support, negative support, and includes social networks.

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Social support theory postulates there is a need for social support (Weiss, 1969). Within SST it is noted that needs for social support change over time, supporters are motivated to help, and the duration of support varies according to the need (Bordes et al., 2006; Janevic et al., 2004; Rapp et al., 1998; Tilden & Weinert, 1987). Utility defines the theory's ability to generate research applicable to nursing (Bredow, 2004). Many studies using SST have provided new insight into nursing issues (Burke & Greenglass, 1999; Kevern & Webb, 2003). For example, SST has been used to study nursing students' academic achievements (Hegge et al., 1999; Hilbert & Allen, 1985), mental health in female nursing students with children (Gigliotti, 2004), nursing job satisfaction (Norbeck, 1985), nursing care of the chronically ill (Tilden & Weinert, 1987), and graduate and undergraduate nursing students (Norbeck, Lindsey, et al., 1983).

In addition, SST has been utilized when studying academic achievement in college students (Cutrona et al., 1994; Malik, 2000), validation of social support measures in Hispanic and non-Hispanic college students (Bordes et al., 2006), well-being in caregivers of dementia patients (Rapp et al., 1998), older women with heart disease (Janevic et al., 2004), illness and health (Lin, Simeone, et al., 1979), cancer patients (Bottomley & Jones, 1997), and pregnancy with complications (Norbeck & Tilden, 1983). Empirical evidence of SST's utility may be seen in the multitude of studies utilizing social support theory.

**Equity theory.** Equity theory (Stewart, 1989) postulates that 1) people attempt to maximize their outcomes, 2) groups attempt to maximize the collective reward, 3) people in inequitable relationships suffer distress, and 4) people in inequitable relationships attempt to restore the equity. This implies that when social support becomes too one-

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sided in a relationship, it causes distress. The persons within this inequitable relationship will attempt to rectify it by returning social support to a more equitable level. This is accomplished by giving support back to the person it is received from. This supports reciprocity or the “bi-directionality” of social support.

### **Summary**

Social support in the social sciences has a long and varied history, starting with Durkheim’s (1979) research into suicide in the late 19<sup>th</sup> century. There was a resurgence of studies on social support in the 1970s lasting into the 1990s. Ensel (1986), Lin, Dean, et al. (1986), and Sarason, Pierce, et al. (1990) conducted research into marital status and social support. They concluded that marital status did affect the level of social support and that the quality of the marriage had a great deal to do with the amount of available social support for married couples. Other research found that when reviewing social support and college students, there was a positive relationship with academic success (Hilgendorf, 1997; Wilcox, 2007). Social support reduced stress and increased perceived health in college students (Cohen, Mermelstein, et al., 1985; Hale et al., 2005; Ruthig et al., 2009; Turner-Musa & Lipscomb, 2007). Peer relationships were a valuable source of social support for college students (Gloria, Kurpius, Hamilton, et al., 1999; Malik, 2000). In addition, families provided invaluable social support to college students (Cutrona et al., 1994; Valentiner et al., 1994).

The literature showed a link between age and the level of social support (Lin, Dumin, et al., 1986; Siebert et al., 1999; Turner & Marino, 1994; Vaux, 1988). It appeared, overall, that social support increased from the teenage years up until old age. However, as people aged there was discrepancy as to whether perceived social support

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levels remained stable, increased, or decreased. In as much as the literature showed that social support is important, economic adequacy must be present for social support to be fully appreciated and utilized (Hirsch et al., 1990; Lin, Dumin, et al., 1986; Sherbourne & Hays, 1990; Turner & Marino, 1994; Wilcox, 1981). People were unable to expend energy obtaining social support when they were trying to locate income in order to meet the basic requirements of daily living. Finally, gender affected the perception and seeking of social support (Burda et al., 1984; Cohen & Wills, 1985; Day & Livingstone, 2003; Vaux, 1988).

Social support did not predict academic success in nursing students (Hilbert & Allen, 1985; Laibach, 2006 Ohrt, 2002). However, there was strong evidence that social support reduced attrition and increased persistence in nursing students (Baccus, 1992; Burris, 1990 Gloria, Kurpius, Hamilton, et al., 1999; Hegge et al., 1999; Kirkland, 1998; Marshall, 1989; Metz et al., 2011; Olson, 2010; Welhan, 2000. Furthermore, faculty support was found to reduce attrition in nursing students (Glogowska et al., 2007; Shelton, 2003; Wells, 2007). Welhan, in 2000 reported that family emotional support was the most important factor in baccalaureate nursing students' decisions to persist in their nursing education.

Peer support was another important source of social support for nursing students (Aston & Molassiotis, 2003; Brown & Edelman, 2000). Improved mental health was related to higher levels of social support in nursing students (Gigliotti, 2004; Haack, 1988; Jensen, 2007; Luo & Wang, 2009; Maville & Huerta, 1997; Montes-Berges & Augusto, 2007; Pagana, 1990). Ohrt (2002) found that the mothers of baccalaureate nursing students provided the majority of their perceived social support. She did not

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include spouses as a source for social support. Wilcox, in 2007, looked at faculty and peer support only when evaluating baccalaureate nursing students' success.

There was a great deal of research on social support, but there was no research on the relationship between marital status, economic adequacy, and age with social support in female baccalaureate nursing students. There was evidence that increased levels of perceived social support reduced attrition in nursing students. Also, increased levels of social support helped improve mental health and reduced stress in nursing students.

Perceived social support is valuable. Marital status, economic adequacy, and age play a noteworthy role in perceived social support. Based on this literature review, there was a need for a better understanding of the relationship between marital status, economic adequacy, and age with perceived social support. Additionally, there was a need to examine the relationship between marital satisfaction and perceived social support in married female baccalaureate nursing students.

### **Chapter 3**

#### **Methods**

Descriptive surveys are designed to collect detailed descriptions of existing variables (LoBiondo-Wood & Haber, 2010). The information then may be examined to determine significant differences and to identify relationships among the variables. There were no published studies available that provided information about the relationships among the variables of age, economic adequacy, marital satisfaction, marital status, perceived social support, and reciprocity in female baccalaureate nursing students. This research was designed as a descriptive survey.

Data were collected online. However, collecting data using the Internet has particular issues. Some of the benefits are low cost, quick and efficient results, less missing data, increased quality of the data being collected since there are typically fewer data entry errors, access to broad geographic areas, ease of participant participation, and increased anonymity for participants (Ahern, 2005; Cantrell & Lupinacci, 2007; Daley, McDermott, Brown, & Kittleson, 2003; Dillman, Smyth, & Christian, 2009; Duffy, 2002; Hanscom, Lurie, Homa, & Weinstein, 2002). The Internet was chosen for data collection for these reasons. Some of the problems in using online data collection are loss of control of the testing environment, bias in participant recruitment, potential breach of security of collected data, possible equipment problems (computer and/or internet access), questionable response rates, blurring of public versus private boundaries on the internet, intentional false answers, and repeat survey respondents.

The participants' answers were directly downloaded from the system into the data analysis program to help ensure that data entry errors were kept to a minimum. In this

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study, the availability of computers was a given for each possible participant since computers were a requirement in the nursing programs they attended, as was computer literacy and familiarity with the Internet.

No recruiting was begun until after Human Research Protections Office (HRPO) and Institutional Review Board (IRB) approval had been obtained at the respective universities. A letter of support was obtained from the Dean/Assistant Dean of the respective nursing schools before HRPO and IRB approval was applied for. The sample was recruited using three steps. The first step consisted of having “on the ground” nursing instructors read a script to their undergraduate nursing classes (see Appendix F). The Dean/Assistant Dean of the respective university nursing schools emailed the script to the instructors. In one week another email was sent directly to the undergraduate nursing students from the Dean/Assistant Dean of the respective schools (see Appendix G). One week following this email the researcher sent an email (see Appendix H) to the students using a ‘Listserve’ (all email addresses were blinded to the researcher). When enough participants had responded and completed the survey all recruitment was stopped.

Maintaining safety and security of the data was achieved through several measures. The data were kept on a password-protected computer, and a protected server was used. The flash drive that was generated was kept in a locked file cabinet when not in use. Only the primary investigator (PI) and her committee chair had access to the data. The computer program Survey Monkey™ had built-in security measures to protect data. The computer used by the PI had an antivirus program installed, and it was updated regularly to assist with the protection of all participant data. All data were anonymous and were reported as group data. Informed consent (see Appendix I) was obtained online

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on the first page of Survey Monkey™. Completion of the survey was considered consent. The second page consisted of screening questions (see Appendix J). These questions helped ensure that the participants were eligible for the study.

As to the issue of falsification of information on the survey, this can occur with pencil and paper surveys (Duffy, 2002). There was no reason to suspect that this Internet survey had an increased likelihood of falsified answers. In addition, the sample size was large enough to account for missing data.

To obtain an optimal response rate on the Internet the format and design of the survey tools needed to be considered (Dillman et al., 2009; Duffy, 2002). The questions were uniform for every measurement instrument, and the demographic questionnaire had a 12-point font and a style that was easy to see and read. Additionally, the use of italics, bold formatting, and special characters were not used. Dillman et al. (2009) further recommended the use of “item in a series” format. The questions appeared thus:

Question?    Answer A    Answer B    Answer C    Answer D

This allowed the participant to choose an answer without needing to scroll up and down or to remember what the possible answers were. The computer coded the answer with the appropriate number according to the choice. This type of format can be seen in Appendix C, the EAS (Lobo, 1982). Each tool selected was set up to resemble the sample above.

Cantrell and Lupinacci (2007) suggested using shorter measurement tools, which may increase the number of participants who finish the entire survey. The PRQ2000 (Weinert, 2003) was selected to gather data about perceived social support and consisted of 15 questions. The IPRI reciprocity subscale (Tilden et al., 1990) consisted of 13 questions. The EAS (Lobo, 1982) provided information about the adequacy of finances

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for day-to-day expenses with seven questions, and the EMS (Fowers & Olson, 1993) had a total of 15 questions. A standard questionnaire (see Appendix K) was also used to obtain demographic data utilizing 12 questions. The entire survey consisted of four measurement tools and a demographic questionnaire with a total of 62 questions. The estimated time to complete the survey was 20-30 minutes.

Finally, giving participants an idea of their progress throughout a survey may help encourage completion of all measurement instruments (Cantrell & Lupinacci, 2007). To do this, as each measurement tool is completed, participants are visually cued about the percentage of the questions they have answered by the use of a bar graph. For instance, after the third of five measurement tools are completed the participants were notified that they had completed approximately 60% of the questions and had 40% left (Cantrell & Lupinacci, 2007).

It was not possible to do this in the current study using the survey tool chosen. However, each survey tool was on a separate page with the exceptions of the IPRI and the demographic sections. These were too long to be placed on one page. The IPRI was placed on two pages and the demographic questionnaire on three pages. After the consent, there were only eight pages for the participant to review and answer. Sensitive questions were left until last as recommended by Dillman et al. (2009).

### **Participants**

The participants for this study were women enrolled in one of two baccalaureate nursing programs in a Southwestern state and who were willing to participate. Both programs were in a university setting. Students had started their nursing program in the junior year. Only female participants were selected to participate due to the limited

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number of male nursing students as well as gender differences in social support (Burda et al., 1984; Cohen & Wills, 1985; Day & Livingstone, 2003; Vaux, 1988). Gender differences in social support were not addressed in this study.

The inclusion criteria were:

1. Female gender
2. 18 years of age or older
3. Consent by all participants (as evidenced by their completion of the online survey)
4. Enrolled in a pre-licensure baccalaureate nursing program (semesters or terms)

Exclusion criteria were:

1. Not consenting to participate
2. Male participants
3. Younger than 18 years of age
4. Registered nursing (RN) license
5. Those who had recently participated in this or a similar study (no duplication of surveys)

**Sample size.** It was important to have enough participants so that if a difference existed it would be detected, but not so many that costs and time would become overly burdensome to the researcher (Munro, 2001). Power, significance, and effect size were also considered before determining the necessary size of the sample. The PRQ2000 (Weinert, 2003) was found to have an effect size of .34 by Russell in 2006. Furthermore, Craig, Weinert, Walton, and Derwinski-Robinson (2006) found effect sizes ranging

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from .26 to .47. An average effect size of .35 was utilized for this research. A power of .80 and a significance of .05 were used per suggestions in Munro (2001). G\* Power™ was used to determine the necessary sample size. The sample size determined was 60 when a linear multiple regression in the *t*-test family was selected, an  $r = .35$  was converted to  $R^2$  with a power of .80, significance of .05, two tailed, and three predictors. Over 123 people responded and 100 gave valid answers. This was a more than adequate sample size. There was no reason to have equal groups in Hypotheses 1 and 2 within the sample for the purpose of this study (B. Boursaw, personal communication, May, 24, 2012). Exactly equal groups in the first two hypotheses would have strengthened the results slightly, but a 60/40 or even a 70/30 sample would not have weakened the results significantly.

School A's nursing program had an enrollment of 121 students in the fall term of 2011 with 101 (83.5%) being women (J. Hennigan, personal communication, June 18, 2012). School B's nursing program had an enrollment of 192 students during the fall of 2011 per the director of the nursing program (A. Kolenovsky, personal communication, June 15, 2012). The two university nursing programs had 313 students in the fall of 2011 with 261 being women (83.4% female). The number of available participants during the semester/term in fall of 2012 was approximately 260 female students.

Research has indicated anywhere from a 24% to 64% response rate to Internet surveys (Cantrell & Lupinacci, 2007; Daley et al., 2003; Duffy, 2002). Higher response rates have been reported when using direct invitations to participate rather than invitations issued generally over the Internet. This study utilized a direct invitation

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through nursing instructors and emails from the Dean/Director as well as from the researcher.

### **Data Collection**

The selected research sites were two university baccalaureate nursing programs in a Southwestern state. After receiving permission from the respective schools' Dean or Director, the researcher obtained human subjects approval from the Human Research Protections Office (HRPO) at one university and the Institutional Review Board (IRB) at the second.

The consent information was on the first page of the online survey site, and completion of the survey was considered consent. Students were free to stop the survey at any time and to leave any question blank that they felt uncomfortable answering. The questions were not expected to make participants feel uncomfortable.

At the end of the data collection, the computer automatically directed the participants to a separate URL where they were able to enter the voluntary raffle, if they desired, for one of two Amazon gift cards. Students were also given the information to enter the voluntary raffle in the consent section if they chose not to participate in the study. Once students were directed from the Survey Monkey™ and onto the new URL they were asked to provide their school email address only. The separate URL ensured that any data the participants provided wouldn't be linked to their school email address. The students did not have to participate in the raffle to participate in the study. At the end of data collection, all students' email addresses from school "A" were placed in one container and the students' email addresses from school "B" in another container. A neutral party was asked to pick a name from each container. These two students each

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received a \$50.00 Amazon gift card delivered to them via their school email. All student email addresses were purged once the gift cards had been delivered.

**Variables.** Tabachnick and Fidell (2007) argued that using the fewest number of variables possible to achieve a solution is best. Therefore, it was necessary to identify the variables before the study began. Additionally, according to LoBiondo-Wood and Haber (2010), collecting information about the important characteristics of the participants should be done in order to evaluate how generalizable the study results will be. This section of the chapter is dedicated to describing the demographic data and variables that were collected for this study.

Demographics and variables included age at last birthday, marital status, economic adequacy, marital satisfaction, perceived social support, and reciprocity. This information was obtained using specified data collection tools and questions (listed later in this chapter). Age was a true interval level variable with distinct levels, and marital status was treated as dichotomous (“married” or “not married”). The other variables were ordinal variables but were collected using Likert scales and were treated as interval level data (Norman, 2010).

**Demographics.** Demographic variables, in addition to those listed above, were collected. They included gender, race/ethnicity, term/semester in the nursing program, term/semester of school, years of education, location of residence while attending university classes (rural, urban, or suburban), number of people living in the household and their relationship to the participant, number of hours working while attending the university, number of miles from nearest relative while attending the university, and yearly income as defined by the census. As to marital status, the number of years was

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also asked, such as the number of years married, number of years living in a relationship if not married, number of years divorced, and number of years separated. No participants were widowed. “Married” consisted of married couples and couples living together in a relationship. “Not married” consisted of all others that did not fit the “married” category.

The decision to dichotomize marital status was based on several factors. During the last three decades, the rate of partners living together without marriage has increased from approximately one half million to over 5 million (Brown, Van Hook, & Glick, 2008). In this study, the number of married students alone would not have been adequate for this category, so the addition of those living with another person in a relationship were added. There have been precedents for treating both of these as one category (Kendzor et. al., 2010; Olsen & Whitman, 2007; Sirri, Magilli, & Grandi, 2011).

### **Measures**

The measurement of variables must be as accurate as possible in order to ensure accuracy of the results (Mertler & Vannatta, 2010; Tabachnick & Fidell, 2007). This means that the selection of the measurement tools must be done carefully so that they actually measure the intended variable and not something close to the intended variable. The selection process was done with great thought while keeping the research questions and definitions in mind. The following measurement tools were selected after reviewing many tools with careful consideration.

**Personal Resource Questionnaire 2000 (PRQ2000).** Perceived social support was measured using the Personal Resource Questionnaire 2000 (PRQ2000) developed by Weinert (2003). In 2003, Weinert determined that a three-factor solution explained 46.2% of the variance in the Personal Resource Questionnaire 2000 (PRQ2000). These three

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factors strongly related to Cobb's (1976) definitions that were used to guide this study. Because of this, the PRQ2000 most closely measured perceived social support as defined in the study. For this reason, and because of the strong psychometric properties, the PRQ2000 was chosen as the best tool to obtain a measurement of perceived social support. Additionally, the PRQ2000 was concise and easily administered.

To establish construct validity, Weinert (2003) first postulated that social support was related to, but not the same as, mental health measures. The PRQ85, an earlier version of the PRQ2000, was correlated with the Beck Depression Inventory (BDI) as well as the State-Trait Anxiety Scale, and moderate significant correlations were found. The PRQ2000 was correlated with the Center for Epidemiologic Studies Depression Scale (CES-D) in multiple samples with  $r = -.51$ ,  $r = -.44$ , and  $r = -.46$  ( $p < .001$ ). Negative correlations with depression were expected. In addition, a Cronbach's alpha of .92 ( $n = 450$ ) was obtained, indicating excellent reliability – the determination of internal consistency (Creswell, 2003).

The PRQ2000 (Weinert, 2003) consisted of 15 questions with a Likert scale of 1 to 7 ranging from *strongly disagree* to *strongly agree*. The range in this study was from 42 through 105. It provided a possible sum of 7 through 105. Higher scores indicated higher levels of perceived social support, thus, allowing for interval level measurement (Norman, 2010).

**Interpersonal Resource Inventory (IPRI) reciprocity subscale.** Reciprocity was measured using Tilden's Interpersonal Resource Inventory's (IPRI) reciprocity subscale (Tilden et al., 1990). Construct validity for the reciprocity subscale was ascertained by correlating the IPRI reciprocity subscale with the Family Relationships

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Index (FRI). However, no statistics were reported. The reciprocity subscale was poorly correlated with the conflict subscale ( $r = -.27$ ). A high correlation was found between social support as measured by the Personal Resource Questionnaire (PRQ) and reciprocity ( $r = .56$ ). Additionally, the IPRI was tested for correlations with the Life Experiences Survey (negative), the Brief Symptom Inventory, and the Marlowe-Crowne Social Desirability Index providing  $r = .02$ ,  $r = -.22$ , and  $r = .22$ , respectively. A Cronbach's alpha of .83 was obtained for the reciprocity subscale, indicating good reliability.

The IPRI (Tilden et al., 1990) consisted of three subscales. Reciprocity was one of the subscales. Each subscale within the IPRI was evaluated separately. The IPRI used a Likert scale. There were 13 items on the reciprocity subscale with items scaled from 1 to 5, with 1 being *strongly disagree* and 5 being *strongly agree*. The total sums for the IPRI reciprocity subscale ranged from 36 through 68 in this study. Higher scores indicated higher levels of reciprocity. One item required reverse coding. The IPRI was the only tool found during the literature review that had the ability to measure reciprocity.

**Economic Adequacy Scale (EAS).** Economic adequacy was measured using Lobo's (1982) Economic Adequacy Scale (EAS). The EAS was used to determine if the economic resources available to participants met their daily needs (economic adequacy). The EAS had a Cronbach's Alpha of .92,  $n = 161$  and .94,  $n = 163$ , demonstrating internal consistency or reliability (Lobo, 1982). Other studies reported a Cronbach's Alpha of .94 (Clayton, Rogers, & Stuijbergen, 1999; Phillips & Stuijbergen, 2006; Stuijbergen, 1999). As a whole, the studies indicated the EAS had excellent reliability.

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The EAS (Lobo, 1982) was comprised of seven questions with a Likert scale ranging from *more than adequate* to *not at all* with scores of 1 through 4. However, one question addressed having enough money to meet the needs of a child. This question was omitted due to large amounts of missing data. It appeared few participants had children, so few answered the question. An additional question regarding the adequacy of economic resources to meet educational demands was used with the permission of Dr. M. Lobo (personal communication, March, 6, 2012). Analysis was conducted, in this study, with this additional question. However, the original question on the EAS about adequate financial resources for care of a baby was not included in the data analysis for this study, again with Dr. Lobo's permission. The range of scores in this study was from 7 to 28, with lower scores indicating higher levels of economic adequacy. For ease of interpretation, the EAS was reverse coded, so higher scores equated to higher levels of economic adequacy.

**ENRICH Marital Satisfaction Scale.** Marital satisfaction was measured using Fowers' and Olson's (1993) ENRICH (Evaluation and Nurturing Relationship Issues, Communication and Happiness) Marital Satisfaction Scale (EMS). This tool was multidimensional in its approach to measuring marital satisfaction, unlike other tools such as the Norton Quality Marriage Index (Norton, 1983), the Kansas Marital Satisfaction Scale (Schumm et. al., 1986), and the Dyadic Adjustment Scale (Spanier, 1976). It also included a mechanism to control scores for "idealistic distortion," which "represents a tendency to describe the marital relationship in unrealistically positive terms" (Fowers & Olson, 1993, p. 177).

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The EMS was developed as a brief multidimensional tool with which to measure marital satisfaction (Fowers & Olson, 1993). The tool consisted of 15 items on a 5-point Likert scale ranging from *strongly disagree* to *strongly agree*. Ten of the items measured marital satisfaction across ten domains: personality, communication, conflict resolution, financial management, leisure activities, sexual relationships, children and parenting, family and friends, equalitarian roles, and religious orientation. The other five items measured idealistic distortion. Six of the 15 items were scored in a negative direction and required reverse coding before data analysis took place. Each scale, marital satisfaction and idealistic distortion, was scored separately. Then the corresponding percentile score was obtained. These percentile scores were obtained from national norms developed by Fowers and Olson (1993) using a sample size of 2,112. A simple calculation was then conducted, which corrected the marital satisfaction score downward according to the amount of idealistic distortion. Higher overall EMS scores represented higher levels of marital satisfaction. The scores in this study ranged from 7 to 62.

The EMS (Fowers & Olson, 1993) test-retest reliability over a period of four weeks was shown to be strong and significant ( $r = .86$ ,  $n = 155$ ). Total item correlations ranged from .52 – .82. Internal validity as measured by Cronbach's alpha was .86. Concurrent validity was obtained by correlating the EMS with the Locke-Wallace Marital Adjustment Scale ( $r = .73$ ). The EMS was also compared with single item measure of satisfaction revealing  $r = .71$  for men and  $r = .77$  for women ( $n = 7,261$ ). Construct validity was established by correlating the EMS with the Family Satisfaction Scale ( $r = .66$  individual scores) indicating strong relationships and with a single item question about divorce ( $r = .56$  for women) indicating a large relationship. Additionally, the EMS

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scale items were correlated to the respective scales on the ENRICH Marital Inventory (Fowers & Olson, 1989). These correlations measured from .58 to .80 with the only exception being equalitarian roles with correlations of .07 for men and .20 for women. The EMS had excellent reliability and validity. It was short, easy to administer, easy to analyze, while at the same time took into account idealistic distortion that has been found to occur in highly satisfactory marriages (Fowers & Olson, 1993).

### **Data Preparation**

**Descriptive analysis.** The data were first evaluated to determine central tendencies, variability, distribution, normality, and missing data (Mertler & Vannatta, 2010). To measure central tendencies the mean, median, and frequencies were calculated (Munro, 2001; Tabachnick & Fidell, 2007). The variables age, perceived social support, reciprocity, marital status, marital satisfaction, and economic adequacy were all examined, depending on the level of the variable.

### **Data Analysis**

All data analysis was conducted using the computer program SPSS (*Grad Pack SPSS Statistics V21.0*, 2012).

**Hypothesis 1:** Perceived social support will be predicted by the independent variables marital status (married or not married), age, and economic adequacy in female baccalaureate nursing students.

**Univariate analysis.** Skew and kurtosis were calculated in order to examine for relatively normal distributions in the variables perceived social support, reciprocity, economic adequacy, age, and marital satisfaction. Several non-normal distributions existed. However, the sample was large enough that the distributions were not an issue

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(Munro, 2001). No transformations were conducted to try to “normalize” the variable distributions.

Several assumptions must exist before the results of correlations, a univariate analysis, to regression, a multivariate analysis can be generalized beyond the sample being studied (Munro, 2001). These assumptions are that the sample must be representative of the population which the results are to be generalized to, that the variables being correlated have approximately a normal distribution, that there is approximately equal variability or homoscedasticity, and that the relationships must be linear.

***Mean, standard deviation, and number of participants.*** The means, standard deviations, and number of participants ( $N$ ) were calculated for social support and the covariates economic adequacy and age (Mertler & Vannatta, 2010). Since the variables mentioned were either interval or treated as interval, this was a suitable evaluation. Marital status was a dichotomous variable and only  $N$  was calculated for the overall data set and the subsets “married” and “not married.”

***Linearity and homoscedasticity.*** Additionally, linearity and homoscedasticity were examined (Mertler & Vannatta, 2010). Linearity assumes there is a straight-line relationship between two variables. This was assessed through the use of individual scatter plots. All showed linearity to be present. Homoscedasticity assumes that the variability for the scores of one continuous variable is approximately the same at all values of another continuous variable. To check homoscedasticity, residuals were plotted against predicted values and against the independent variables (Munro, 2001). The values varied around a straight line.

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**Correlations.** Correlations between social support, age, and economic adequacy were calculated. This allowed for the examination of the relationships between the variables (Munro, 2001). However, in multiple regression, if the correlations are too high, then the variables are thought to represent the same or very similar information and can confound the results (Mertler & Vanatta, 2010). Only the correlation between perceived social support and reciprocity exceeded  $r = .70$ . This may indicate that the PRQ2000 and the IPRI reciprocity subscale measure many of the same factors.

**Cronbach's alpha.** Cronbach's alpha was the test of reliability selected (Mertler & Vannatta, 2010; Munro, 2001). It was calculated for the PRQ2000 (Weinert, 2003) and the EAS (Lobo, 1982). The PRQ2000 and EAS were both found to have excellent reliability.

**Multivariate analysis.** Multiple regression was the choice for evaluating the amount of variance in perceived social support from the independent variables (IV) marital status, age, and economic adequacy. Multiple regression had the advantage of telling the researcher the strength of the relationship of each IV and not just if there was a relationship, as an analysis of covariance would (Mertler & Vannatta, 2010; Munro, 2001).

**Multivariate outliers.** The Mahalanobis distance is a descriptive statistic that provides a relative measure of a data point's distance from a common point. Mahalanobis distance was used to determine if multivariate outliers were present (Mertler & Vannatta, 2010). It was calculated and compared with the standard in Munro (2001). No multivariate outliers were found.

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**Model “fit.”** A residual plot of standardized residuals versus predicted values was assessed to help diagnose the “fit” of the regression model (Mertler & Vannatta, 2010). An *F* test was also conducted in the ANOVA table to assess for significance. A significant *F* was found. Each independent variable (marital status, economic adequacy, and age) was also examined for significant relationships with perceived social support. Economic adequacy was the only independent variable found to have a significant relationship with perceived social support.

**Multicollinearity.** Multicollinearity arises when intercorrelations are moderate to high between the IVs. The method used for examining multicollinearity was tolerance. Mertler and Vannatta (2010) stated that a tolerance greater than .10 would not create an issue for multicollinearity. The minimum tolerance obtained was .706. Multicollinearity was not problematic.

**Hypothesis 2:** Reciprocity will be predicted by the independent variables marital status (married or not married), age, and economic adequacy in female baccalaureate nursing students.

**Univariate and multivariate analysis.** The analysis for Hypothesis 2 was basically the same as for Hypothesis 1 with the exception that reciprocity, as measured by the reciprocity subscale of the IPRI (Tilden et al., 1990), was the dependent variable being studied, not perceived social support.

**Hypothesis 3:** There will be positive association between social support and marital satisfaction in married (married or living with a significant other) female baccalaureate nursing students.

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***Mean, standard deviation, and number of participants.*** The means, standard deviations, and number of participants ( $N$ ) were calculated for marital satisfaction (Mertler & Vannatta, 2010). These findings are available in Chapter 4.

***Cronbach's alpha.*** Cronbach's alpha, a test of reliability was calculated for the EMS (Mertler & Vannatta, 2010; Munro, 2001). The EMS was found to have an overall reliability of .937. Reliability was excellent for the EMS.

***Spearman's rho.*** The Spearman's rho or rank correlation was used to evaluate the degree of association (Pett, 1997). This is a non-parametric data analysis technique that can be used when samples are not normally distributed and/or are small (Bonett & Wright, 2000; Pett, 1997). The rankings of the observations were correlated, not the actual scores. The only assumptions needed for the Spearman's rho are, 1) two variables that are randomly selected, continuous, and are at least ordinal in measurement and 2) two observations that are paired. Both of these assumptions were met.

### **Summary**

This chapter included a discussion of the participants, sample size requirements, data collection method, variables, and demographics. It also included the selected data collection measures with their psychometrics and reasons for selection, data preparation, and selected data analysis methods.

## **Chapter IV**

### **Results**

The purpose of this study was to determine the relationship between marital status, economic adequacy, and age with social support in female baccalaureate nursing students in the Southwest United States. Additionally, since reciprocity was considered to be part of social support, the relationship between marital status, economic adequacy, and age with reciprocity was explored. Finally, the relationship between marital satisfaction and social support in married students (or those living in a relationship with another person) was examined. Participants were recruited from two state-supported universities that will be referred to as universities “A” and “B.” In this chapter, the results of the quantitative statistics are presented.

#### **Eligibility**

Five exclusionary questions were asked at the beginning of the electronic, online questionnaire. Respondents were not eligible to participate if they were male, enrolled in a nursing program other than a baccalaureate program, younger than 18, had a registered nursing license, or had recently participated in a similar study. Additionally, any participant leaving any of these questions blank was excluded from the data analysis. After reviewing these data, three participants had stopped answering questions in the first or second measurement tool. These participants were eliminated from data analysis as well. Out of the original 123 participants, 100 were eligible for inclusion in the study.

#### **Reliability**

The reliability of the main measurement instruments PRQ2000 (perceived social support), IPRI (reciprocity), EAS (economic adequacy), and the EMS (marital

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satisfaction) was determined by calculating Cronbach's alpha. All four instruments had similar Cronbach's alphas to those found by each of the developers of the measurement instruments, and all exhibited good to excellent reliability. Cronbach's alpha for the EAS was conducted using six of the original questions with the addition of a question asking about adequate finances to meet the daily needs of school. The question about adequate finances for the daily needs of a baby was eliminated due to missing data. These changes were made with the approval of M. Lobo, the developer of the EAS (personal communication, March 6, 2012). (Table 1 shows the reliability values for the overall data set as well as the subsets "married" and "not married.")

### **Primary Variables**

The primary variables used for data analysis were perceived social support, reciprocity, economic adequacy, marital status, age at last birthday, and marital satisfaction. These variables were examined for the study population and then by the subsets "married" and "not married." (Table 1 presents these data.)

The PRQ2000, IPRI, EAS, EMS, and age were also examined for normal distribution. (The skew and kurtosis are available in Table 1.) However, with larger sample sizes, deviation from normal distribution was not as important as with small sample sizes (Munro, 2001; Tabachnick & Fidell, 2007). The size of the overall data set was sufficiently large enough that deviation from normality did not cause great concern. However, the subsets "married" and "not married" had smaller sample sizes. Normality was a concern for these smaller sample sizes. Non-parametric data analysis techniques were selected for the smaller subsets due to their smaller size and departure from normality.

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Table 1

*Statistics for the Primary Study Variables Perceived Social Support (PRQ2000), Reciprocity (IPRI), Economic Adequacy (EASrev), Marital Satisfaction (EMS), Marital Status (MS), and Age*

Variable	<i>n</i>	Mean	<i>SD</i>	Min	Max	Skew	Kurtosis	Cronbach's alpha
PRQ2000	93	89	14.09	42	105	-1.76***	2.78***	.938
IPRI	99	54	5.77	36	68	-0.07	1.44**	.821
EASrev	90	11	4.91	1	22	-0.15	-0.03	.936
EMS	47	32	15.85	7	62	0.149	-1.26	.937
Age	90	27	7.04	19	49	1.23***	0.73	
MS	90			0	1			
Not Married	---	---	---	---	---	---	---	---
PRQ2000	48	88	15.84	42	105	-1.59***	1.77*	.947
IPRI	51	54	5.30	38	68	0.05	2.06**	.793
EASrev	45	10	4.86	1	22	-0.21	-0.08	.930
Age	46	23	4.20	19	41	2.40***	6.72***	.943
Married	---	---	---	---	---	---	---	---
PRQ2000	36	91	11.15	49	105	-2.11***	6.15***	.917
IPRI	38	55	6.09	36	68	-0.18	1.97**	.851
EASrev	36	11	4.79	1	22	-0.32	0.84	.937
EMS	25	33	16.31	11	62	0.08	-1.37	.933
Age	38	31	7.78	20	47	0.48	-0.67	

*Note.* *SD* = standard deviation, \**p* < .05, \*\**p* < .01, \*\*\**p* < .001

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**Imputation and recoding.** A number of participants selected two answers for questions on the PRQ2000, IPRI, EAS, and EMS. The decision was made to take the average of the two answers, as long as they were very close in number. For example, if a participant answered both 3 and 4, then a score of 3.5 was inputted. Since the original answers indicated the participant was unsure of whether 3 or 4 best answered the question, then the average seemed to be a better approximation of their intent. By doing this, these participants were not deleted from the data analysis. However, one participant answered with two numbers: one from the highest and one from the lowest possibilities, i.e. 1 and 7. This participant's data were excluded from the data analysis since it was not possible to ascertain the intent.

All of the measurement instruments except for the EAS had higher values equated with higher levels. For ease of interpretation the EAS was reverse coded, which was denoted as EASrev. This means that a higher value indicated a higher level of economic adequacy, or the reverse of the original variable.

**Marital status.** When evaluating the categories for marital status, it was noted that seven participants of the 100 who were eligible had more than one response to the question, and three participants had missing data, leaving only 90 valid responses. The breakdown was 32% married, 7% living with another person in a relationship, and 49% single never married. The categories separated and divorced had 1% each. Marital status was reduced to two groups. One group consisted of "married" participants (married as well as those living with another person in a relationship). The second group consisted of those who were not married. This group included participants who were separated (married but living separately), divorced, and single never married. These participants

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were all referred to as “not married.” Marital status was coded “0” for “married” and “1” for “not married.”

**Missing data.** The main variables (perceived social support, reciprocity, economic adequacy, age, and marital status) had anywhere from 1% to 10% missing data. Only those who were “married” were asked to complete the marital satisfaction portion of the electronic questionnaire. However, only 25 participants out of 39 (64%) of the “married” group completed the marital satisfaction instrument. Additionally, the sample sizes for the regression models were 69 and 73, which left a 27% to 31% missing data rate.

### **Demographic Characteristics of Participants**

Demographic information was obtained using an electronic questionnaire online. Demographics of the participants were collected as an overview of the participants’ characteristics to help facilitate possible generalizability. The data were evaluated for the entire sample and by the subsets “married” and “not married.” (Table 2 presents some of these data.)

**Race/ethnicity in the overall data set.** Questions were asked to determine race/ethnicity and yearly income. Almost 90% indicated they were either white/non-Hispanic or Hispanic in equal proportions in the overall sample. The “married” subset had a larger percentage of white participants and a lower percentage of Hispanic participants than the overall sample. On the other hand, the “not married” subset had a smaller percentage of white participants and a larger percentage of Hispanic participants than the overall sample. (The race/ethnicity statistics for the overall sample and the subsets “married” and “not married” are available in Table 2.)

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**Annual income, number of persons living in the household, and hours worked per week.** Close to two thirds (65%) of the participants indicated that their annual income was less than \$15,000, while only a small proportion (7%) reported an income greater than \$50,000. A greater percentage (88%) of participants who were “not married” had an income of less than \$15,000 than those participants who were “married” (37%). This is most likely due to the “married” subset listing the income for the household and not just for themselves (These data can be viewed in Table 2.)

The number of persons living in the household ranged from 1 to 6 with one exception. One person indicated they lived in a dormitory with 56 other people. This person was excluded from data analysis. The majority (61%) of participants reported living in a one-person to three-person household. The subset “not married” had a larger percentage (69%) of small (1 to 3 person) households than the “married” group (54%). (These data are available in Table 2.)

The majority of participants (52%) did not work, with 24% working 11-20 hours per week. A larger percentage (20%) of participants who were “not married” worked over 20 hours per week than those who were “married” (8%). (Demographic data about the number of hours worked are available in Table 2.)

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Table 2

*Race/Ethnicity, Annual Income, Household Size, and Hours Working*

	Study Population		Married Subset		Not Married Subset	
	<i>n</i>	(%)	<i>n</i>	(%)	<i>n</i>	(%)
Race/Ethnicity	97		39		50	
White	43	(44)	21	(54)	20	(40)
Hispanic	43	(44)	14	(36)	24	(48)
Native American	2	(2)	1	(3)	1	(2)
Asian	2	(2)	1	(3)	1	(2)
Two or more	7	(7)	2	(5)	4	(8)
Annual Income	96		38		51	
Less than \$15,000	62	(65)	14	(37)	45	(88)
\$15,000-\$49,999	27	(28)	18	(47)	5	(10)
\$50,000-\$99,999	5	(5)	4	(11)	1	(2)
\$100,000 and above	2	(2)	2	(5)	0	
Number in Household	97		39		51	
1-3 (small)	59	(61)	21	(54)	35	(69)
4-5 (medium)	31	(32)	17	(43)	10	(19)
6 or more (large)	7	(7)	1	(3)	6	(12)
Hours Working/Week	93		38		49	
0-20	78	(84)	35	(92)	39	(80)
20-40	15	(16)	3	(8)	10	(20)

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**Race/Ethnicity statistics for the overall sample, each university, the CON, and the SON.** Race and ethnicity information was obtained for each university (*Official Enrollment Report Spring 2013*, 2013; *Quick Facts*, 2012) as well as for the College of Nursing (CON) at university “A” (*Data Book*, 2012) and the School of Nursing (SON) at university “B” (P. Schultz, personal communication, June 20, 2013). The race/ethnicity statistics for university “A’s” CON and university “B’s” SON were similar to that of the study population. One difference noted was that no African American students participated in the study. Also, a smaller percentage of Native American students were present in the overall sample than attended university “A’s” CON. In addition, a smaller percentage of Asian students were in the overall study sample than at university “A’s” CON or university “B’s” SON. A slightly higher percentage of Hispanics were in the study than in either of the two nursing programs, even though participants were only recruited from the two nursing programs and not from the universities in general. The overall study sample was not representative of the two university nursing programs. (These race/ethnicity statistics for the universities and their nursing programs are available in Table 3.)

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Table 3

*Race/Ethnicity for University “A” and University “B” as well as the College of Nursing (CON) at University “A” and the School of Nursing (SON) at University “B”*

Race/Ethnicity	Sample (%)	University “A” (%)	CON “A” (%)	University “B” (%)	SON “B” (%)
White	(44)	(38)	(45)	(34)	(46)
Hispanic	(44)	(43)	(37)	(47)	(41)
Native American	(2)	(6)	(12)	(2)†	(1)
Asian	(2)	(3)	(5)	(1)	(6)
African American	(0)	(3)	(1)	(3)	(3)
Two or More	(7)	(3)		(1)	

*Note.* † = included Alaskan Native.

**Distance to nearest relative and age.** The number of miles to the nearest relative while attending the university ranged from 0 to 3000. The median distance to the nearest relative was 15 miles for both the overall sample and the subset “married.” The subset “not married” had a median distance to the nearest relative of 28 miles. This does not indicate whether the nearest relative was a provider of social support or not. These data are not shown in any table. The ages of the participants ranged from 19 to 47. The mean for age in the overall sample was 27 years and the standard deviation (*SD*) was 7.04. The “married” participants mean age was eight years older than the “not married” participants. There was no available information about ages of the participants at the two university nursing programs. (The data for age can be viewed in Table 1.)

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**Location of residence, years of education, and previous degree.** The location of residence was solicited because the PRQ2000 was developed and extensively utilized in rural settings (Weinert, 2003). The majority of participants (52%) reported living in an urban setting with just over 25% living in a rural area. The percentages varied only a little when explored by the subsets “married” and “not married.” Over 66% of the “not married” participants reported no college degree. Two thirds of the “married” participants had 16 years of formal education and had a college degree while only 39% of the “not married” participants did. Previous degrees ranged from associate’s to master’s. These data are not available in table format.

### **Data Analysis**

**Evaluation of Hypothesis 1.** In order to analyze the first hypothesis, a linear regression was conducted. In addition, the relevant variables were analyzed for univariate linearity, multivariate outliers, and multicollinearity. Hypothesis 1 stated: Perceived social support will be predicted by the independent variables marital status (married or not married), age, and economic adequacy in female baccalaureate nursing students.

***Regression of perceived social support with economic adequacy, marital status, and age.*** Univariate linearity was assessed through the use of scatter plots with perceived social support (PRQ2000) and each of the independent variables - economic adequacy and age. No curvilinearity was observed when individual scatter plots were examined. Additionally, assessment for multivariate outliers was conducted by calculating Mahalanobis distances. Using the standard set forth in Munro (2001, p. 419), a cutoff value for Mahalanobis distance of 16.266 was determined. The largest Mahalanobis distance calculated was 10.150. No multivariate outliers were present.

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A linear regression was conducted to determine if the independent variables (economic adequacy, marital status, and age) predicted perceived social support in female baccalaureate nursing students. Regression results indicated a significant ( $F(3,65) = 3.024, p < .05$ ) overall model with  $R^2 = .122$  and  $R^2_{adj} = .082$ . This model accounted for approximately 12% of the variance in perceived social support. Hypothesis 1 was accepted. The variables economic adequacy, marital status, and age did predict perceived social support in female baccalaureate nursing students. Calculating tolerances assessed multicollinearity. Since the minimum tolerance was .706, multicollinearity was not problematic.

Additionally, each independent variable was evaluated for significance. The regression coefficients for the independent variables (economic adequacy, marital status, and age) were calculated as well as their significance. Economic adequacy was the only statistically significant independent variable. Age and marital status were not significant. A regression coefficient of 1.00 ( $p < .01$ ) for economic adequacy was obtained and indicated that as economic adequacy increased by one unit, perceived social support also increased by one unit, assuming all other variables were held consistent. (These regression coefficients are available in Table 4.)

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Table 4

*Regression Model for Perceived Social Support (PRQ2000) with Economic Adequacy (EASrev), Marital Status, and Age (n = 69)*

Variables	Regression Coefficient	(95% Confidence Interval)
Constant	87.63**	(68.86 to 106.40)
EASrev	1.00**	(0.30 to 1.70)
Marital Status	-4.04	(-11.71 to 3.63)
Age	-0.21	(-0.76 to 0.33)

*Note.* \*\* $p < .01$ .

**Evaluation of Hypothesis 2.** In order to analyze the second hypothesis, a linear regression was again conducted. The data were once again analyzed for univariate linearity, multivariate outliers, and multicollinearity. Hypothesis 2 stated: Reciprocity as measured by the IPRI reciprocity subscale will be predicted by the independent variables marital status (married or not married), age, and economic adequacy as measured by the EAS in female baccalaureate nursing students.

**Regression of reciprocity with economic adequacy, marital status, and age.** No curvilinearity was observed when examining the individual scatter plots. Also, Mahalanobis distances were calculated to assess for multivariate outliers. The largest Mahalanobis distance calculated was 9.084 signifying no multivariate outliers were present.

Again, a linear regression was conducted to determine if the independent variables (economic adequacy, marital status, and age) were predictors of reciprocity. Regression results indicated a non-significant ( $F(3,70) = 1.490, p = .225$ ) overall model

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with  $R^2 = .060$  and  $R^2_{adj} = .020$ . This model accounted for only 6% of the predicted variance in reciprocity. Hypothesis 2 was rejected. The variables economic adequacy, marital status, and age did not predict reciprocity in female baccalaureate nursing students. Yet, again, tolerances were calculated to assess for multicollinearity. The minimum tolerance of .677 signified that multicollinearity was not problematic.

Once more, each independent variable was evaluated for significance. The regression coefficients for each (economic adequacy, marital status, and age) were calculated, as was their significance. None of the independent variables were statistically significant. (The regression coefficients are available in Table 5.)

Table 5

*Regression Model for Reciprocity (IPRI), Economic Adequacy (EASrev), Marital Status, and Age (n = 73)*

Variables	Regression Coefficient	(95% Confidence Interval)
Constant	55.07**	(47.02 to 63.12)
EASrev	0.27	(-0.02 to 0.55)
Marital Status	-1.73	(-5.10 to 0.63)
Age	-0.08	(-0.31 to 0.15)

*Note.* \*\* $p < .01$ , “Married” was the reference for Marital Status.

**Evaluation of Hypothesis 3.** In order to evaluate Hypothesis 3, rank order correlations were utilized. The effect, or the strength of the relationship between the variables perceived social support, reciprocity, economic adequacy, age, and marital satisfaction in “married” participants was examined. Hypothesis 3 stated: There is a

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positive association between social support, as measured by the PRQ2000, and marital satisfaction, as measured by the EMS, in married female baccalaureate nursing students.

The overall sample was large enough ( $N = 100$ ) to allow for Pearson's correlation coefficient ( $r$ ) to be utilized. The subsets "married" ( $n = 39$ ) and "not married" ( $n = 50$ ) were smaller and required the use of a non-parametric data analysis. Spearman's rho rank order correlations were calculated for the groups "married" and "not married." Marital satisfaction was only calculated in the "married" group.

*Relationships between perceived social support, reciprocity, economic adequacy, age, and marital satisfaction in participants who were "married," "not married," and in the overall sample.* Correlations were calculated in order to determine the strength of the relationship between variables or the effect of one variable on another (Munro, 2001). Perceived social support and reciprocity increased together with a large effect ( $R = .779$ ,  $p < .01$ ) on each other in the "married" group. This also held true in the overall sample ( $r = .718$ ,  $p < .01$ ) and the "not married" group ( $r = .740$ ,  $p < .01$ ). Perceived social support and economic adequacy also increased together and had a large effect ( $r = .553$ ,  $p < .01$ ) on each other in the "married" group. This relationship was found to remain the same in the "not married" group ( $r = .465$ ,  $p < .01$ ) but dropped to a medium effect in the overall sample ( $r = .338$ ,  $p < .01$ ).

Perceived social support was not significantly related to age in the "married" group or in the other two groups, the overall sample and the "not married" group. Nevertheless, in the "married" group, perceived social support and marital satisfaction had a large effect ( $r = .559$ ,  $p < .01$ ) on each other, which increased together. Economic adequacy and marital satisfaction increased together with a large effect ( $r = .480$ ,  $p < .05$ )

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on each other in the “married” group. The relationship of perceived social support and economic adequacy with marital satisfaction was not examined in the overall sample or the “not married” group. Only those participants who were “married” were asked to complete the marital satisfaction instrument.

Reciprocity and economic adequacy increased together with a medium effect ( $r = .386, p < .05$ ) on each other in the “married” group. This dropped to a small effect ( $r = .227, p < .05$ ) in the overall sample, and no statistically significant relationship was found in the “not married” group. Reciprocity had no statistically significant relationship with age in any group. Additionally, economic adequacy and age had no statistically significant relationship in the total sample and two subgroups. Finally, age and marital satisfaction had no significant relationship in the “married” group. (All of these results are available in Table 6.)

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Table 6

*Correlation Data for Primary Study Variables Perceived Social Support (PRQ2000), Reciprocity (IPRI), Economic Adequacy (EASrev), Age, and Marital Satisfaction (EMS)*

Overall Sample	1	2	3	4
Pearson's <i>r</i>				
1. PRQ2000	---			
2. IPRI	.718** (91)	---		
3. EASrev	.338** (83)	.227* (89)	---	
4. Age	-.002 (83)	.014 (89)	.029 (81)	---
“Not Married” Spearman's rho				
1. PRQ2000	---			
2. IPRI	.740** (48)	---		
3. EASrev	.465** (42)	.180 (45)	---	
4. Age	-.229 (43)	-.033 (46)	-.132 (40)	---
“Married” Spearman's rho				
1. PRQ2000	---			
2. IPRI	.779** (35)	---		
3. EASrev	.553** (33)	.385* (35)	---	
4. Age	-.057 (35)	.050 (37)	-.189 (35)	---
5. EMS	.559** (22)	.334 (25)	.480* (24)	.018 (24)

*Note.* \* $p < .05$ , \*\* $p < .01$ , ( $n$ ) = valid number of participants.

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### Summary

The “not married” subset worked more hours each week than the “married” group, even though annual income levels were lower in the “married” group. However, economic adequacy did not vary across the total sample and two subgroups. This may have been due to “married” persons reporting their family’s income and not their personal income. The “married” subset also had a mean age that was eight years older than the “not married” subset and were more likely to already have a college degree. Additionally, the overall sample was close to the race/ethnic demographics of both nursing programs with the exception that Hispanic participants were slightly overrepresented and Native American participants underrepresented.

Perceived social support was predicted by the independent variables economic adequacy, marital status, and age in female baccalaureate nursing students. These independent variables accounted for 12% of the predicted variance in perceived social support. However, economic adequacy was the only statistically significant variable. The correlations in the overall data set between perceived social support and economic adequacy were of a moderate strength and positive. In both the “not married” and “married” subsets the effect between perceived social and economic adequacy was large. Economic adequacy and perceived social support increased together. This implies economic adequacy was important to perceived social support levels in female baccalaureate nursing students. However, age was not significantly correlated in the total sample and two subgroups. Age was also not significant in the linear regression. Age was not a good indicator of perceived social support.

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Reciprocity, on the other hand, was not predicted by economic adequacy, marital status, and age in female baccalaureate nursing students. One reason for the lack of prediction was most likely a result of the differences in the correlations between reciprocity and economic adequacy between the overall sample and each subset, “married” and “not married.” The “married” group had a large effect between reciprocity and economic adequacy. However, in the overall data set the effect was only medium, and no statistically significant relationship was found in the “not married” group.

The effect between perceived social support and marital satisfaction was large. Perceived social support and marital satisfaction increased together in the “married” group. Marital satisfaction and economic adequacy also increased together in “married” female baccalaureate nursing students. They had a medium effect on each other. Further discussion of the data analysis will be presented in Chapter 5.

## **Chapter V**

### **Discussion of Results**

This chapter provides a review of the purpose of the study, the research problems and questions, participant characteristics and presents an interpretation of the significant and non-significant results. It also provides implications of key findings including theoretical implications, limitations, and suggestions for future studies. A summary of each outcome is discussed in relation to the pertinent literature.

#### **Purpose of the Study**

The purpose of this study was to examine the relationship of perceived social support and reciprocity with marital status, age, and economic adequacy. The study also explored the strength of the relationship between perceived social support and marital satisfaction in married female baccalaureate nursing students.

#### **Research Problems**

Published data going back to the 1960s on the relationship between marital status, economic adequacy, and age with perceived social support found social support to be very helpful in college students as well as in nursing students. The problem was that studies with these variables in female baccalaureate nursing students could not be located in the literature. There were large numbers of studies that examined marital status, socioeconomic status, and age with social support. However, these studies were in populations differing from the population in this study: female baccalaureate nursing students. In addition, very little data could be located in the literature about the strength of the relationship between marital satisfaction and perceived social support in married

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persons and none could be located that examined this relationship in married female baccalaureate nursing students.

### **Participant Characteristics**

A response rate of 47% was obtained in this study (123 responses out of 260 possible participants). The number of respondents was more than adequate. Only 39 “married” female students participated in this study. This meant that a parametric data analysis technique, such as a multiple regression or correlation, was not possible for Hypothesis 3. Instead, a non-parametric data analysis technique was chosen (Bonett & Wright, 2000; Pett, 1997). The focus of Hypothesis 3 was to determine the relationship between marital satisfaction as measured by the ENRICH (Evaluation and Nurturing Relationship Issues, Communication and Happiness) Marital Satisfaction Scale (EMS) (Fowers & Olson, 1993) and perceived social support as measured by the PRQ2000 (Weinert, 2003). Of the participants choosing to participate in the raffle, two-thirds had email addresses from University “B” and one-third from University “A.” Six participants entered “NA” for the raffle site. They were not included in the raffle drawing.

Knowing the characteristics of the participants was important in order to be able to generalize the results to other populations. This information was obtained through the use of an electronic, online, demographic questionnaire. Questions were asked about race/ethnicity, income, number of persons living in the household, hours worked weekly while in nursing school, location of residence while attending the university, educational level and college degrees, age, and distance to the nearest relative. These characteristics were explored in the overall sample and within the subsets “married” and “not married.”

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**Race/Ethnicity.** The percentages in the “married” and the “not married” subsets for race/ethnicity were very similar to those in the overall sample. However, there were a higher percentage of white participants in the “married” subset (54%,  $n = 21$ ) than in the overall study sample (44%,  $n = 44$ ). On the other hand, there were a higher percentage of Hispanic participants in the “not married” subset (48%,  $n = 24$ ) than in the overall study sample (44%,  $n = 43$ ).

After examining the race/ethnicity data between the overall sample and the two nursing programs several differences were identified. The College of Nursing (CON) at university “A” had a higher percentage of Native American students and a lower percentage of Hispanic students than the overall study sample. Also, no African American students participated in the study.

When comparing the percentages of the overall sample with universities “A” and “B,” some differences were also noted. One difference was that the overall sample had a larger percentage of white students than university “A” or university “B.” University “A” had a larger percentage of Native American and Asian students than the overall study sample. Additionally, university “B” had a larger percentage of Asian students than the overall study sample. However, the rest of the race/ethnicity percentages at universities “A” and “B” were similar to the university nursing programs and the sample in the study.

It’s important to note that the overall study sample did not include men, because, proportionally, very few men were enrolled in both nursing programs. University “A’s” CON had only 20 men enrolled and university “B’s” SON had 32 men enrolled. Also, in the overall sample, Hispanic students were slightly overrepresented, while Native American students were underrepresented. Care must be taken when attempting to

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generalize the results of this study beyond the two university nursing programs from which participants were recruited.

**Income level.** The “not married” subset had 88% with income levels below \$15,000 annually, the “married” subset had 37% with incomes less than \$15,000 annually, while the overall study sample had 65% with annual incomes of less than \$15,000. This difference between the “married” and “not married” subsets may have been due to the way the income question was asked on the demographic questionnaire. The question simply asked for “annual income.” If “married” participants used their household income and not their personal income it would help to explain the differences found. The findings for economic adequacy showed that the overall study sample, the “married” subset, and the “not married” subset had equivalent levels of economic adequacy in spite of the differences in annual income. This would substantiate the premise that some or even many “married” participants entered their household income and not just their own income.

**Household size.** The maximum household size was six persons with the exception of one participant living in a dormitory. The overall sample showed that the majority of participants resided in a small household (1-3 people). The “not married” subset had a higher percentage (69%) residing in a small household than the “married” subset (54%). The “married” subset had a larger percentage (43%) of medium households (4-5 people) than either the “not married” subset (19%) or the overall sample (32%). These findings indicate that the participants who were “married” lived in larger households than those who were “not married.” It was not possible to determine why this occurred. Yet, it can be surmised that “married” participants were more apt to live with

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their partners and children (if any), while the “not married” participants were more apt to live alone or in small groups. This area needs further exploration in future studies.

**Hours worked weekly.** The number of hours worked each week also varied between the subsets “married” and “not married.” The data indicate that the participants who were “married” worked fewer hours per week than their “not married” counterparts. The “not married” participants may have been financially responsible for themselves with no one else helping to support them financially. This may account for the differences in hours worked per week.

**Location of residence.** Reported location of residence while at the university showed very little difference between the subsets “married” and “not married.” A slightly larger percentage of the “not married” group lived in a rural setting than the “married” group. The overall sample as well as the subsets “married” and “not married” had the greatest percentage of participants living in an urban setting.

**Education level and college degree.** Participants who were “married” were much more likely to have a college degree than those who were “not married.” There was almost a two to one ratio. Previous college degrees ranged from associate’s to master’s. This finding is likely to be related to the age difference between the “married” and “not married” groups. Since the mean age for “married” participants was eight years older than the “not married” participants, it would seem the “married group” had more time to have attended college and obtained a degree. In fact, the mean age for the “not married” group was 23, which did not leave them much time to already have obtained a college degree.

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**Age.** In past research, there has been some confusion about how age affected perceived social support. One previous study found that perceived social support was lowest from ages 18 to 25 years, increased from 26 to 34 years of age, and became greatest from 35 to 45 years of age (Turner & Marino, 1994). Another study found that elderly persons had the least amount of perceived social support (Siebert et al., 1999). A third study found that perceived social support increased from 18 years of age through the mid-20s, decreased from the mid-20s through 30 years of age, then began to increase at age 30, with social support increasing slowing after age 50 and peaking at age 60 (Lin, Dumin, et al., 1986).

In this study, the ranges for age differed between the overall study sample and both subsets. The overall study sample had ages ranging from 19 to 47 years. The “not married” subset had a range from 19 to 41 years, while the “married” subset had a range of 20 to 47 years. The mean age in the overall study sample was 27 with a *SD* of 7.04, and in the “married” subset the mean was 31 with a *SD* of 7.78. However, in the “not married” subset the mean age was 23 with a *SD* of 4.20, indicating the “not married” participants were younger with ages closer to the mean than in the overall data set or the “married” subset. Overall, the “married” participants were older than the “not married” participants. Older persons have had more years in which to meet someone they can commit to in a relationship such as getting married or living together. Younger persons, on the other hand, have not had the time to have found and formed such relationships.

**Distance to the nearest relative.** The distance to the nearest relative ranged from zero to 3000 miles. The “married” subset had a median distance of 28 miles, while the “not married” subset had a median distance of 15 miles. This indicates that “married”

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participants lived farther from their nearest relative, not counting their spouse or partner, than the “not married” participants. It is possible to secure social support from persons living very far away through the use of electronic means such as email, messaging, Facebook, Twitter, Skype, and phone calls. However, these data must be used with caution since this does not indicate whether the nearest relative was a source of social support, no matter how near or far away they lived.

### **Significant Findings**

**Relationship between perceived social support and reciprocity.** Statistical analysis of the overall sample indicates perceived social support and reciprocity had a large positive relationship with each other. In other words, they both increased together. This relationship was probably because reciprocity is considered to be a part of social support (Cobb, 1976; Heany & Israel, 2002; Jacobson, 1986; Jung, 1984; Sarason & Sarason, 2009; Shumaker & Brownell, 1984; Tilden, 1986). The strength of this relationship was carried throughout the overall sample and within both of the subsets “married” and “not married.”

**Economic adequacy.** The research in the literature stated that socioeconomic status has a positive relationship with social support (Hirsch et al., 1990; Sherbourne et al., 1990; Turner & Marino 1994; Wilcox, 1981). However, one study did not indicate socioeconomic status as affecting social support (Lin, Dumin, et al., 1986). In the regression model, this study found economic adequacy and perceived social support had a medium and significant relationship with each other. The regression was only calculated in the overall data set. It was a positive relationship, meaning they both increased together. Additionally, the relationship between economic adequacy and

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reciprocity was small in the overall sample and medium in the “married” subset. As economic adequacy increased so did reciprocity, and vice versa. On the other hand, economic adequacy and reciprocity had no statistically significant relationship in the “not married” subset.

**Age.** Conversely, age had no statistically significant relationship with perceived social support, reciprocity, or economic adequacy in the overall study sample and both subsets. Also, age and marital satisfaction were not significantly correlated in the “married” group. However, age and marital status were related. “Married” participants tended to be older than “not married” participants. These findings were contrary to some studies in the literature review, which found that age influenced levels of social support (Antonucci & Jackson, 1990; Lin, Dumin, et al., 1986; Siebert et al., 1999; Turner & Marino, 1994; Vaux, 1988).

**Marital satisfaction.** Hypothesis 3 stated: There is a positive association between social support, as measured by the PRQ2000, and marital satisfaction, as measured by the EMS, in married female baccalaureate nursing students. Hypothesis 3 was supported by the data. Perceived social support and marital satisfaction exhibited a large, positive relationship with each other for participants who were married or living with another person in a relationship. In other words, perceived social support and marital satisfaction increased together in “married” participants. This agreed with the literature that stated the quality of the marriage was more important in relation to perceived social support than a married status (Ensel, 1986; Lin, Dean, et al., 1981 Sarason, Pierce, et al., 1990). Marital status, on the other hand, had no significant relationship with perceived social support in the overall group or in both of the subsets “married” and “not married,” further

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strengthening the concept that marital satisfaction was a better measurement when assessing perceived social support in married female baccalaureate nursing students. It was not possible to explore marital satisfaction in the overall sample or the “not married” subset since only “married” participants were asked to complete this portion of the survey.

**Relationships of perceived social support with economic adequacy, marital status, and age.** Hypothesis 1 stated: Perceived social support will be predicted by the independent variables marital status (“married” or “not married”), economic adequacy, and age in female baccalaureate nursing students. Hypothesis 1 was supported by the data. Economic adequacy, marital status, and age accounted for 12% of the variance in perceived social support. In the regression model, both marital status and age did not exhibit a significant relationship with perceived social support, either in the overall sample or in both of the subsets “married” and “not married.” Acetelli (1996) found that marital status was only one small piece of social support, and, in this study, it was apparent that it was not a large enough piece to be significant in female baccalaureate nursing students. In addition, the literature was conflicting about the relationship between age and social support, and this study did not help to clarify this relationship. Nevertheless, economic adequacy was found to have a statistically significant relationship with perceived social support in the regression model.

It was also clear in the research that the income levels for the majority of the participants were very low. Most had incomes below \$15,000 per year. This helped validate the finding that economic adequacy was very important to levels of perceived social support in female baccalaureate nursing students. Finding methods to assist nursing students to increase economic adequacy may help to increase their perceived social

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support levels. Anything that can be done to increase social support may also improve mental health, increase persistence, reduce attrition, and assist with coping during times of stress in female baccalaureate nursing students.

This study also supported the research that found that marital satisfaction was more important to social support than just the state of being married (Ensel, 1986; Lin, Dean, et al., 198; Sarason, Pierce, et al., 1990). On the other hand, this study contradicted research by Lin, Dumin, et al. (1986) that found married women reported higher levels of social support than unmarried women.

### **Non-Significant Findings**

Hypothesis 2 stated: Reciprocity will be predicted by the independent variables marital status (“married” or “not married”), age, and economic adequacy in female baccalaureate nursing students. Conversely, Hypothesis 2 was not supported by the data. In the regression model marital status, economic adequacy, and age were not found to have a significant relationship to reciprocity in female baccalaureate nursing students. After finding a significant relationship between economic adequacy and perceived social support as well as the large relationship between perceived social support and reciprocity, this finding was unexpected. Additionally, the literature review did identify numerous studies in which reciprocity was related to social support (Cobb, 1976; Heany & Israel, 2002; Jacobson, 1986; Jung, 1984; Sarason & Sarason, 2009; Shumaker & Brownell, 1984; Tilden, 1986). This finding was most likely related to the lack of a significant relationship between reciprocity and economic adequacy in the “not married” group and only a small relationship in the overall sample.

### **Implications of Key Findings**

A key finding was that economic adequacy accounted for a portion of perceived social support in the regression model. Furthermore, economic adequacy had a moderate relationship with perceived social support in the overall sample and a large relationship in the “married” subset. In addition, marital satisfaction and perceived social support had a large and positive relationship in the “married” subset. These have implications, which are discussed in the following paragraphs.

In this study, economic adequacy was a principal factor in perceived social support in female baccalaureate nursing students. The implication is that finding strategies to help increase economic adequacy in female baccalaureate nursing students may also increase their perceived social support. Additionally, there was an unexplained difference between economic adequacy and reciprocity involving the “married” and “not married” groups that contributed to the lack of a relationship between economic adequacy and reciprocity in the overall regression model.

Moreover, marital status was not related to perceived social support in the overall study sample, the “married” subset, or the “not married” subset. However, marital satisfaction was largely related to perceived social support in “married” participants. The implication is that marital satisfaction may be a better measure to use than marital status when exploring perceived social support in a “married” population.

**Theoretical implications.** The theoretical underpinnings for this study were social support theory (SST) (Schaffer, 2004) and equity theory (Stewart, 1989). Social support theory suggests that social support is needed and present in all human relationships, and this need alters over time according to the changes that occur in a

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person's life (Bordes et al., 2006; Janevic et al., 2004; Rapp et al., 1998, Tilden & Weinert, 1987; Weiss, 1969). The results of this study supported the premise that perceived social support is present and needed in the relationships of female baccalaureate nursing students as evidenced by the medium to large relationship between perceived social support and the variables reciprocity and economic adequacy. In addition, this study illustrated the differences in perceived social support between "married" and "not married" female baccalaureate nursing students. Marital satisfaction became a large and significant factor in perceived social support levels in "married" participants. However, marital status was not statistically significant in relation to perceived social support or reciprocity levels in the overall sample and in both of the subsets "married" and "not married."

Equity theory proposes that people endeavor to return inequitable levels of social support to equitable levels (Stewart, 1989). People attempt to give as much support as they receive in a relationship. In the overall study sample and both subsets, reciprocity or the give and take of social support in a relationship was supported by the large relationship between reciprocity and perceived social support. The implication is that perceived social support and reciprocity are intertwined and affected by many of the same factors.

### **Limitations**

There were several limitations in this study that must be considered. First, the overall sample was non-representative of the two university nursing programs that were used to recruit participants. This study also did not have any African American participants and a lower than expected number of Native American participants. This

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non-representative group makes generalizing the results problematic. Second, the sample size was small for the subsets “married” and “not married,” even though an adequate sample was obtained for the overall group. This precluded the use of parametric data analysis for the two subsets. A larger sample would be needed in future studies to correct this issue.

Third, it was apparent from the findings that the three independent variables (marital status, economic adequacy, and age) were only the “tip of the iceberg.” The majority of the variance in perceived social support was left untouched. More effort should be made to identify other factors influencing perceived social support before future research is attempted. Fourth, the lack of a significant relationship between economic adequacy and reciprocity in the “not married” subset was different than expected. This requires further research so that it may be verified or disproven.

Fifth, the PRQ2000 and the IPRI reciprocity subscale may have measured many of the same factors, as evidenced by the high correlation between them. This may have caused unintended bias in the participants’ answers. Last, it should be noted that all researchers bring some bias to studies in the selection of measurement tools, data analysis techniques, and evaluation of the results (LoBiondo-Wood & Haber, 2010). There may be unintended researcher bias in this study, in spite of great efforts to remain unbiased.

### **Future Directions**

Previous research has found that increased levels of perceived social support led to better mental health (Montes-Berges & Augusto, 2007), increased persistence in nursing school (Hegge et al., 1999; Welhan, 2000), remaining in school longer (Marshall, 1989), decreased stress levels in nursing school (Jensen, 2007), decreased stress in the

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clinical setting (Mahat, 1998), and decreased attrition rates (Burris, 1990). A lack of social support was found to increase depression in nursing students (Haack, 1988). In fact, a lack of social support was linked to increased dropout rates in nursing school (Glogowska et al., 2007). Furthermore, Native American nursing students associated higher levels of social support with success (Metz et al., 2011). They did so through identifying with nurses and nursing. Increased levels of social support also led to reduced attrition in nursing school for African American nursing students (Gloria, Kurpius, et al., 1999), and increased levels of social support from family and friends strongly predicted persistence. Some African American nursing students have used social support as a major coping strategy (Kirkland, 1998). Luo and Wang (2009) also found that social support helped baccalaureate nursing students cope.

Increased social support has so many positive outcomes for nursing students, as discussed above, that finding ways to increase social support in baccalaureate nursing students is vital for their future success in baccalaureate nursing programs. This research identified increased economic adequacy as an important factor in increasing perceived social support. Future research must be conducted on how to increase economic adequacy in nursing students so that students may take advantage of the benefits of social support. University systems that assist students with additional sources of income need to be assessed and bolstered. Some potential areas for assistance include: identifying appropriate scholarships and financial aid, applying for scholarship moneys, identifying appropriate student loans, and finding subsidized housing. Furthermore, assistance finding work-study programs on campus and locating part time jobs in the healthcare industry may help relieve financial distress. Jobs in the healthcare field will not only

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provide higher income but also provide exposure to concepts being taught in the nursing program. Also, students could benefit from help in approaching family members that may be able to assist them financially. These and other sources of economic assistance for baccalaureate nursing students need to be sought out and expanded so that more nursing students have higher levels of economic adequacy. It is crucial we learn how to aid baccalaureate nursing students increase their economic adequacy levels so they may increase their perceived social support levels and benefit from both.

Sources for social support in baccalaureate nursing students include their mothers (Ohrt, 2002), their peers (Aston & Molassiotis, 2003), and their nursing faculty (Shelton, 2003; Wells, 2007). Also, parents (mothers and fathers), friends, and other family members are sources of emotional support for nursing students (Brown & Edelmann, 2000). Moreover, support from husbands and children, is important for reducing maternal role stress in nursing students (Gigliotti, 2004). Considering these options for attaining social support, it is imperative that ways to increase support from these sources be researched and identified. What are participants with increased social support doing or what do they have that participants with decreased perceived social support don't do or don't have? These are crucial questions for future research.

Improving faculty support is one area that nursing educators can address if we find out what kinds of support nursing students want and need from them. To identify the kinds of assistance that baccalaureate nursing students' desire, more research is needed. Also, we must find ways to include spouses, parents (particularly mothers), children, other family members, friends, and fellow nursing students in providing increased levels of social support. Further research is needed to identify how this could be accomplished

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and the methods these family members and friends could use. Researching the use of electronic communication methods such as Facebook, Twitter, phone calls, emails, messaging, and Skype may help find ways for baccalaureate nursing students to obtain increased levels of social support from their support network. In addition, teaching family, friends, and peers how to better utilize these methods may help increase available sources of social support.

In addition, it is important to broaden the participant pool to include other university nursing schools that have larger percentages of African American students. Also, new methods are needed to increase Native American participation in future studies. Additional research with a more diverse participant sample would strengthen our understanding of perceived social support in female baccalaureate nursing students. This could help us find additional methods to increase social support. Future research should also look at the differences between people who are married and those in relationships who are living together.

An important question to ask at this point is, “What would nursing educators do with this information? What future questions should they ask? How can nursing educators think outside of the box in order to help find solutions to the questions arising from this study such as: how do we help baccalaureate nursing students increase their levels of perceived social support and economic adequacy? Perhaps it is time to start allowing nursing students to attend school part-time so that they may work while attending nursing school. Additionally, work study programs between nursing schools and local healthcare facilities may be developed which would allow nursing students to work one trimester/semester then attend nursing school a trimester/semester. This has not

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been encouraged in the past because nurse educators have been concerned that students might forget important nursing knowledge if they took a semester off. More research is needed to determine whether or not this would negatively affect nursing students.

Additionally, nursing schools could allow the military nurse programs to speak with students early each semester to raise awareness of the potential sources for financial assistance should they choose to become part of the “Army,” “Navy,” or “Air Force” nurse corps. The ROTC units on campus should also be asked to speak with students each semester to increase awareness about financial assistance that may be available through these programs. It is time for nurse educators to seek new and perhaps nontraditional sources of financial assistance for the nursing students in their programs.

### **Summary**

This research examined the relationship between perceived social support, reciprocity, marital status, economic adequacy, age, and marital satisfaction in female baccalaureate nursing students. The findings indicate that economic adequacy plays an important role in perceived social support in both “married” and “not married” female baccalaureate nursing students. Additionally, there was a large and positive relationship between marital satisfaction and perceived social support in “married” female baccalaureate nursing students. Conversely, marital status and age did not play a role in predicting perceived social support as was expected from the literature. The literature, however, did not contain research on female baccalaureate nursing students, and these findings may, indeed, be representative. Since these findings were inconsistent with the literature, and this area had no studies published on perceived social support, it is evident that more research is needed in baccalaureate nursing students.

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On the other hand, it should be noted that the PRQ2000 and the IPRI reciprocity subscale asked very similar questions. This similarity caused some concern about the construct validity of the IPRI reciprocity subscale. Was the IPRI reciprocity subscale measuring reciprocity, and was it measuring reciprocity with enough precision? These issues may have contributed to the lack of significant findings in the regression of reciprocity with marital status, economic adequacy, and age.

Overall, it was economic adequacy that had an impact on perceived social support in female baccalaureate nursing students, not age or marital status. Additionally, marital satisfaction and perceived social support had a large relationship with each other in the “married” subset, indicating it is a better measurement than marital status when examining perceived social support in “married” female baccalaureate nursing students. These are the two areas that were the most striking and merit future research.

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Appendix A

**PERSONAL RESOURCE QUESTIONNAIRE (PRQ2000)**

**Weinert**

Below are some statements with which some people agree and others disagree. Please read each statement and **CIRCLE** the response most appropriate for you. There is no right or wrong answer.

- 1 STRONGLY DISAGREE**
- 2 DISAGREE**
- 3 SOMEWHAT DISAGREE**
- 4 NEUTRAL**
- 5 SOMEWHAT AGREE**
- 6 AGREE**
- 7 STRONGLY AGREE**

- Q-1. There is someone I feel close to who makes me feel secure . . . . . 1 2 3 4 5 6 7
- Q-2. I belong to a group in which I feel important .. 1 2 3 4 5 6 7
- Q-3. People let me know that I do well at my work (job, homemaking) . . . . . 1 2 3 4 5 6 7
- Q-4. I have enough contact with the person who makes me feel special . . . . . 1 2 3 4 5 6 7
- Q-5. I spend time with others who have the same interests that I do . . . . . 1 2 3 4 5 6 7
- Q-6. Others let me know that they enjoy working with me (job, committees, projects) . . . . . 1 2 3 4 5 6 7
- Q-7. There are people who are available if I need help over an extended period of time. . . . . 1 2 3 4 5 6 7
- Q-8. Among my group of friends we do favors for each other. . . . . 1 2 3 4 5 6 7
- Q-9. I have the opportunity to encourage others to develop their interests and skills. . . . . 1 2 3 4 5 6 7
- Q-10. I have relatives or friends that will help me out even if I can't pay them back . . . . . 1 2 3 4 5 6 7
- Q-11. When I am upset, there is someone I can be with who lets me be myself . . . . . 1 2 3 4 5 6 7

PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

- 1 STRONGLY DISAGREE**
- 2 DISAGREE**
- 3 SOMEWHAT DISAGREE**
- 4 NEUTRAL**
- 5 SOMEWHAT AGREE**
- 6 AGREE**
- 7 STRONGLY AGREE**

Q-12. I know that others appreciate me as a person . . . 1 2 3 4 5 6 7

Q-13. There is someone who loves and cares  
about me . . . . . 1 2 3 4 5 6 7

Q-14. I have people to share social events and fun  
activities with . . . . . 1 2 3 4 5 6 7

Q-15. I have a sense of being needed by another  
person . . . . . 1 2 3 4 5 6 7

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Appendix B

Interpersonal Relationship Inventory (IPRI)

Reciprocity Subscale

Most relationships with people we feel close to are both helpful and stressful. Below are statements that describe close personal relationships. Please read each statement and select the answer that best fits your situation. There are no right or wrong answers.

**These first statements ask you to disagree or agree.**

**Select the answer that best fits.**

- |  |                          |                 |                |              |                       |
|--|--------------------------|-----------------|----------------|--------------|-----------------------|
| 1. Within my circle of friends, I get just as much as I give .....                         | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| 2. I'm available to my friends when they need to talk .....                                | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| 3. When I have helpful information, I try to pass it on to someone who could use it .....  | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| 4. I think I put more effort into my friends than they put into me .....                   | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| 5. I don't mind loaning money if a person I care about needs it .....                      | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| 6. I'm satisfied with the give and take between me and people I care about ...             | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| 7. I'm happy with the balance of how much I do for others and how much they do for me ...  | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |
| 8. When I need help, I get it from my friends, and when they need help, I give it back ... | <b>Strongly Disagree</b> | <b>Disagree</b> | <b>Neutral</b> | <b>Agree</b> | <b>Strongly Agree</b> |

**These next statements ask you how often something happens.**

**Select the answer that best fits.**

- |  |              |                     |                  |                     |                   |
|--|--------------|---------------------|------------------|---------------------|-------------------|
| 9. I let people I care about know that I appreciate them ..... | <b>Never</b> | <b>Almost Never</b> | <b>Sometimes</b> | <b>Fairly Often</b> | <b>Very Often</b> |
|--|--------------|---------------------|------------------|---------------------|-------------------|

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10. Some people come to me for a boost in their spirits.....	<b>Never</b>	<b>Almost Never</b>	<b>Sometimes</b>	<b>Fairly Often</b>	<b>Very Often</b>
11. I tell others when I think they're great .....	<b>Never</b>	<b>Almost Never</b>	<b>Sometimes</b>	<b>Fairly Often</b>	<b>Very Often</b>
12. Some people I care about come to me for advice .....	<b>Never</b>	<b>Almost Never</b>	<b>Sometimes</b>	<b>Fairly Often</b>	<b>Very Often</b>
13. I let others know I care about them .....	<b>Never</b>	<b>Almost Never</b>	<b>Sometimes</b>	<b>Fairly Often</b>	<b>Very Often</b>

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Appendix C

**Economic Adequacy Scale**

**The following are general questions related to the economic needs of daily living. I want to know if YOUR income allows you to meet YOUR NEEDS. Please select your answer.**

- |   |                    |            |                    |            |
|---|--------------------|------------|--------------------|------------|
| a. Does your income allow you to meet your needs for daily living.....    | MORE THAN ADEQUATE | ADEQUATELY | LESS THAN ADEQUATE | NOT AT ALL |
| b. Does your income allow you to meet your rent or mortgage payment       | MORE THAN ADEQUATE | ADEQUATELY | LESS THAN ADEQUATE | NOT AT ALL |
| c. Does your income allow you to meet your food bills.....                | MORE THAN ADEQUATE | ADEQUATELY | LESS THAN ADEQUATE | NOT AT ALL |
| d. Does your income allow you to meet your health care...                 | MORE THAN ADEQUATE | ADEQUATELY | LESS THAN ADEQUATE | NOT AT ALL |
| e. Does your income allow you to participate in.....                      | MORE THAN ADEQUATE | ADEQUATELY | LESS THAN ADEQUATE | NOT AT ALL |
| f. Does your income allow you to meet baby costs (leave blank if NA)..... | MORE THAN ADEQUATE | ADEQUATELY | LESS THAN ADEQUATE | NOT AT ALL |
| g. Does your income allow you to meet the financial costs of school.....  | MORE THAN ADEQUATE | ADEQUATELY | LESS THAN ADEQUATE | NOT AT ALL |
| f. Does your income allow you to meet other financial needs you have..... | MORE THAN ADEQUATE | ADEQUATELY | LESS THAN ADEQUATE | NOT AT ALL |

**Specify below**

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Appendix D

**ENRICH Marital Satisfaction Scale**

Below are some statements with which some people agree and others disagree. Please read each statement and **CIRCLE** the response most appropriate for you. There is no right or wrong answer.

- 1. Strongly Disagree**
- 2. Moderately Disagree**
- 3. Neither Agree or Disagree**
- 4. Moderately Agree**
- 5. Strongly Agree**

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. My partner and I understand each other perfectly.  | 1 | 2 | 3 | 4 | 5 |
| 2. I am not pleased with the personality characteristics and personal habits of my partner.   | 1 | 2 | 3 | 4 | 5 |
| 3. I am very happy with how we handle role responsibilities in our marriage.                  | 1 | 2 | 3 | 4 | 5 |
| 4. My partner completely understands and sympathizes with my every mood.                      | 1 | 2 | 3 | 4 | 5 |
| 5. I am not happy with our communication and feel my partner does not understand me.          | 1 | 2 | 3 | 4 | 5 |
| 6. Our relationship is a perfect success.   | 1 | 2 | 3 | 4 | 5 |
| 7. I am very happy about how we make decisions and resolve conflicts.                         | 1 | 2 | 3 | 4 | 5 |
| 8. I am unhappy about our financial position and the way we make financial decisions.         | 1 | 2 | 3 | 4 | 5 |
| 9. I have some needs that are not being met by our relationship.                              | 1 | 2 | 3 | 4 | 5 |
| 10. I am very happy with how we manage our leisure activities and the time we spend together. | 1 | 2 | 3 | 4 | 5 |

## PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

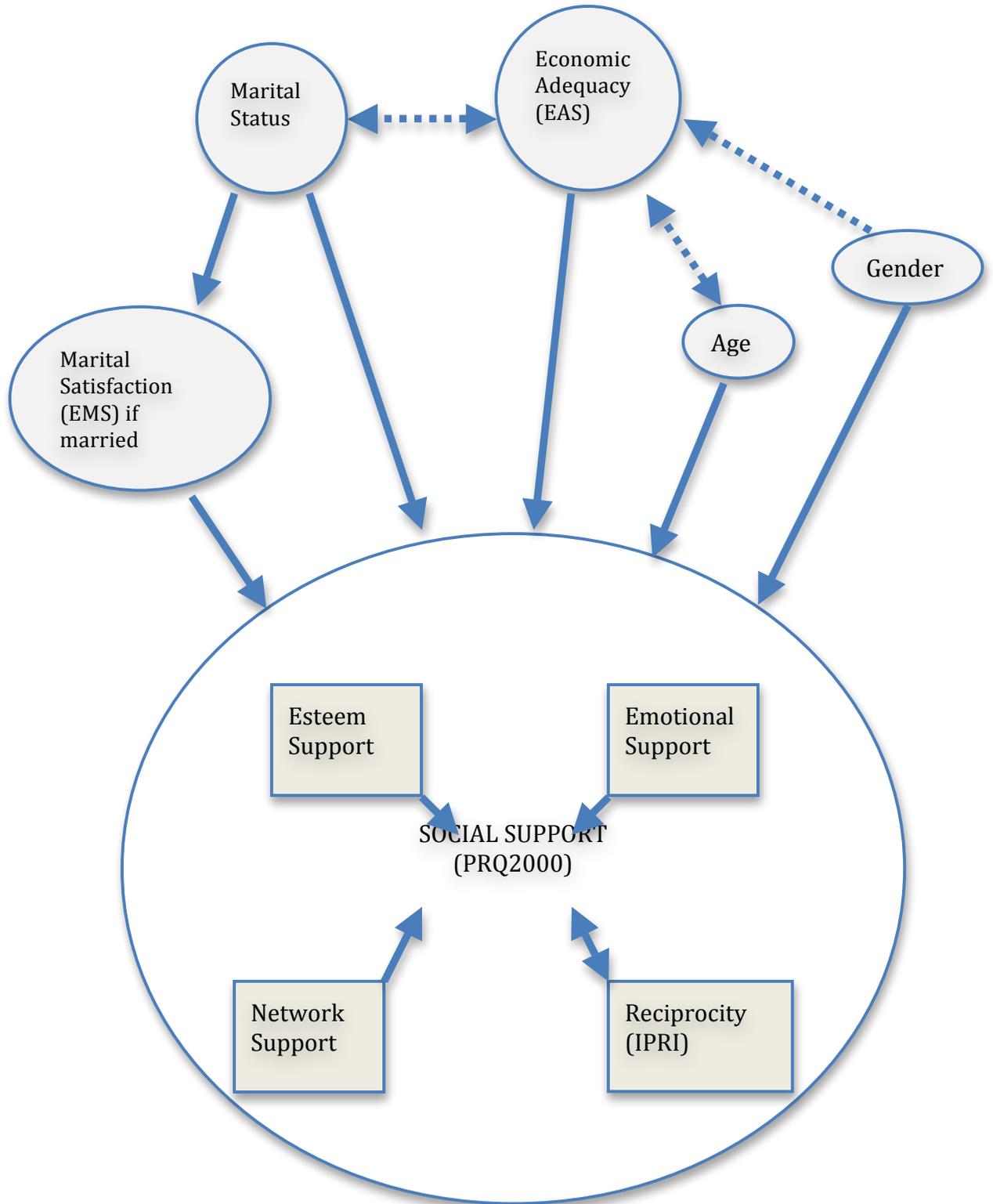
Below are some statements with which some people agree and others disagree. Please read each statement and **CIRCLE** the response most appropriate for you. There is no right or wrong answer.

- 1. Strongly Disagree**
- 2. Moderately Disagree**
- 3. Neither Agree or Disagree**
- 4. Moderately Agree**
- 5. Strongly Agree**

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 11. I am very pleased about how we express affection and relate sexually.              | 1 | 2 | 3 | 4 | 5 |
| 12. I am not satisfied with the way we each handle our responsibilities as parents.    | 1 | 2 | 3 | 4 | 5 |
| 13. I have never regretted my relationship with my partner, not even for a moment.     | 1 | 2 | 3 | 4 | 5 |
| 14. I am dissatisfied about our relationship with my parents, in-laws, and/or friends. | 1 | 2 | 3 | 4 | 5 |
| 15. I feel very good about how we each practice our religious beliefs and values.      | 1 | 2 | 3 | 4 | 5 |

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Appendix E



## PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

*Figure 1.* Depiction of theoretical framework for social support.

# PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

## Appendix F

### Script for Nursing Instructors

Please read the following statement to your undergraduate nursing students.

Thank you for your assistance in this endeavor,

Jane Smith

You will receive an email, in the next week or 2, inviting you to participate in a study of female Baccalaureate nursing students. The email will come from someone in our school.

The study is being conducted by Jane Smith, a PhD student at UNM. She is being supervised by (committee chair goes here). The purpose of this study is to examine how the amount of social support you receive affects your life.

You will not receive class credit or a grade for your participation. The survey will take only 20-30 minutes of your time. There is a voluntary raffle for a \$50.00 Amazon.com gift certificate; however, you are not required to enter the raffle to participate.

Thank you,

Jane Smith

## PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

### Appendix G

#### First Email to Students from Dean/Director

You are being asked to participate in a study of female Baccalaureate nursing students. This study is being conducted by Jane Smith, a PhD student at UNM. She is being supervised by (committee chair goes here).

The purpose of this study is to examine how the amount of social support you receive affects your life. There is a voluntary raffle for a \$50.00 Amazon.com gift certificate. You are not required to enter the raffle to participate.

You may access this study at (the URL will be placed here).

# PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

## Appendix H

### Second Email to Students from Researcher

If you have already participated in the following research thank you very much. However, if you have been very busy, as nursing students are, you may have forgotten about this opportunity.

The study is being conducted by Jane Smith, a PhD student at UNM. She is being supervised by (committee chair goes here).

The purpose of this study is to examine how the amount of social support you receive affects your life. You will not receive class credit or a grade for your participation. The survey will take only 20-30 minutes of your time. There is a voluntary raffle for a \$50.00 Amazon.com gift certificate; however, you are not required to enter the raffle to participate.

You may access this study at (the URL will be placed here).

Thank you,

Jane Smith

# PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

## Appendix I

### Consent Form

**STUDY TITLE: Perceived Social Support in Female Baccalaureate Nursing Students In A Southwestern State**

**RESEARCHERS:**

**Marie Lobo PhD, RN, FAAN**  
**University of New Mexico**  
[mlobo@salud.unm.edu](mailto:mlobo@salud.unm.edu)

**Jane L. Smith, MSN, PhD(c), RN**  
**Graduate Student**  
**University of New Mexico**  
[JaSmith@salud.unm.edu](mailto:JaSmith@salud.unm.edu)

**DESCRIPTION:**

Jane Smith, supervised by Marie Lobo, is conducting research as part of her dissertation requirements. The purpose of this study is to examine how the amount of social support you receive affects your life. This information will prove helpful in future research about how social support affects the success of female baccalaureate nursing students while in school. The participants will be asked to complete an online survey that will take approximately 20 – 30 minutes. Survey questions ask about the support received while attending school. An example of a question is, “People let me know that I do well at my work (job, homemaking).” At the end of the survey is a demographic questionnaire. A sample question is, “Age at last birthday.”

Once the survey has been completed you will be offered the option of proceeding to a separate Web Site at which you may enter a voluntary raffle for a \$50.00 Amazon gift card. You do not need to enter the raffle if you do not wish to. It is strictly voluntary. If you choose to participate the raffle drawing will be conducted after all data have been collected. The gift card will be delivered to you via your email address, which you must provide on the separate Web Site (no names will be asked for). After the gift certificates have been delivered all email addresses will be purged/destroyed. There is no way to link your email address to the survey questions.

You may enter the raffle even if you choose not to participate in the study. Simply go to the this Web Site (insert URL here) and enter your school email address without your name.

You must be at least 18 years of age to participate. You are not required to answer any question you do not wish to answer. However, it will greatly help the results of the study if you can answer as many of the questions as possible.

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### **EXCLUSION CRITERIA:**

1. Male nursing students
2. Students in an associate degree nursing program
3. Students younger than 18 years of age
4. Students not consenting to participate
5. Students with a registered nursing (RN) license
6. Students that have already participated in the study before (no duplication of surveys)

### **RISKS AND BENEFITS:**

The risks involved are the possible breach of security of collected data or emails provided for the voluntary raffle. However, you are not asked to provide names and there is no way to link your survey answers to your email should you choose to participate in the raffle. Additionally, no health information will be solicited. You will be asked to spend approximately 20 – 30 minutes of your time ONLINE completing the questions. The benefits may include identification of support strategies that can help future nursing students.

### **VOLUNTARY NATURE OF PARTICIPATION:**

You may withdraw from the study at anytime since your participation is entirely voluntary. You may leave any question blank that you do not wish to answer without penalty. If you decide not to participate you are still eligible to participate in the voluntary raffle. If you decide to participate you may discontinue at anytime throughout the process without penalty and remain eligible to participate in the voluntary raffle.

### **CONFIDENTIALITY:**

Any information obtained about you from the answers to the questions will be kept strictly anonymous. All information will be shared as group data. You will not be asked to give your name or any identifying information about yourself while on the website answering questions. If you choose to participate in the raffle you will be directed to a separate link where you will be asked to leave only your school email (no names or other information please). This is to assure the anonymity of your answers. The results of this study may be used in my dissertation, professional journal publications, professional conference presentations and released to potential research subjects, however, you will never be individually identified. All data will be reported as group data. The email addresses used for the voluntary raffle will be destroyed after the gift certificates have been awarded. The results of the study will be sent to all undergraduate students in each participating university through the use of a list serve. This is to blind the researchers to student names and identifying information. There will be no “email list” kept by the researchers.

If you have any questions about this research project please feel free to call Dr. Marie Lobo at (505) 272-2637 or Jane Smith at (575) 636-4760. If you have any questions regarding your legal rights as a research subject you may call the UNMHSC Office of Human Research Protections at (505) 272-1129. If you feel any distress and /or are uncomfortable during or after completing the survey you may contact the Student Health

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& Counseling services at the University of New Mexico at 505-277-4537 or the Counseling services at New Mexico State University at 575-646-2731. Both have free counseling services for students.

### **INFORMED CONSENT:**

Your completion of the survey indicates consent.

**CONTINUE TO THE NEXT PAGE** (see Appendix J)

## PERCEIVED SOCIAL SUPPORT AND FEMALE BSN STUDENTS

### Appendix J

#### (Screening Questions to Follow Informed Consent)

Thank you very much for your willingness to participate in this important study. We have a few questions about you before you start the survey:

Gender:        Female            Male (If male goes to a page that states; Thank you very much for your interest, however you do not meet the criteria for this study.)

Type of student:        BSN            ADN (If ADN goes to a page that states; Thank you very much for your interest, however you do not meet the criteria for this study.)

Are you older than 18 years of age?    YES    NO (If NO goes to a page that states; Thank you very much for your interest, however you do not meet the criteria for this study.)

Do you have a Registered Nurse License?    NO    YES (If YES goes to a page that states; Thank you very much for your interest, however you do not meet the criteria for this study.)

In the past several weeks have you participated in a survey about social support and nursing students?    NO    YES (If YES goes to a page that states; Thank you very much for your interest, however you do not meet the criteria for this study.)

Do you wish to participate in the study?  
YES (They will be taken to the first page of the survey)

NO (They will be taken to a page that states: Thank you very much for your interest, you may still participate in the raffle for the \$50.00 Amazon gift card. If you choose to participate please proceed to (URL is placed here). You are not required to participate in the raffle.)

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Appendix K

Demographics

1. Age at last birthday \_\_\_\_\_
2. Race/ethnicity (from 2011 census) Select only one
  - a. Non-Hispanic White \_\_\_\_\_
  - b. Hispanic/Latino \_\_\_\_\_
  - c. African American \_\_\_\_\_
  - d. Native American \_\_\_\_\_
  - e. Asian \_\_\_\_\_
  - f. Native Hawaiian \_\_\_\_\_
  - g. Native Alaskan \_\_\_\_\_
  - h. Two or more races
3. Semester/Term in nursing program
  - a. 5th semester/1st term \_\_\_\_\_
  - b. 6th semester/2<sup>nd</sup> term \_\_\_\_\_
  - c. 7<sup>th</sup> semester/3<sup>rd</sup> term \_\_\_\_\_
  - d. 8<sup>th</sup> semester/4<sup>th</sup> term \_\_\_\_\_
4. Semester/Term at university
  - a. 5th semester/1st term \_\_\_\_\_
  - b. 6th semester/2<sup>nd</sup> term \_\_\_\_\_
  - c. 7<sup>th</sup> semester/3<sup>rd</sup> term \_\_\_\_\_
  - d. 8<sup>th</sup> semester/4<sup>th</sup> term \_\_\_\_\_
5. Last year of education completed \_\_\_\_\_

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6. Do you have a masters, bachelors, or associates degree No \_\_\_\_\_  
Yes \_\_\_\_\_ if Yes ⇒ write in your degree and what field it is in  
\_\_\_\_\_
7. Number of people living in the household \_\_\_\_\_ Check all that apply  
Husband \_\_\_\_\_  
Significant other/Partner \_\_\_\_\_  
Parent \_\_\_\_\_  
Child \_\_\_\_\_  
Relative \_\_\_\_\_  
Housemate \_\_\_\_\_  
Roommate \_\_\_\_\_  
Other (explain) \_\_\_\_\_
8. Location of residence while attending the university  
a. Urban \_\_\_\_\_  
b. Rural \_\_\_\_\_  
c. Suburban \_\_\_\_\_
9. Miles from nearest relative while attending university \_\_\_\_\_
10. Hours worked per week while attending the university \_\_\_\_\_
11. Marital status (only check one, choose the one that most closely fits your situation)  
a. Currently married No Yes if Yes ⇒ Years Married \_\_\_\_\_  
b. Living in a significant relationship (but not married) No Yes if  
Yes ⇒ Years living together \_\_\_\_\_

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c. Married but living separately (separated) No Yes if Yes  $\Rightarrow$  Years

Separated \_\_\_\_\_

d. Single never married No Yes

e. Divorced No Yes if Yes  $\Rightarrow$  Years Divorced \_\_\_\_\_

f. Widowed No Yes if Yes  $\Rightarrow$  Years Widowed \_\_\_\_\_

12. Yearly income

a. Under \$15,000 \_\_\_\_\_

b. \$15,000 to \$24,999 \_\_\_\_\_

c. \$25,000 to \$34,999 \_\_\_\_\_

d. \$35,000 to \$49,999 \_\_\_\_\_

e. \$50,000 to \$74,999 \_\_\_\_\_

f. \$75,000 to \$99,999 \_\_\_\_\_

g. \$100,000 and above \_\_\_\_\_