Mediators of the Relationship between Social Support and Positive Health Practices in Pregnant Women

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Original Manuscript
Submitted to: Nursing Research
August 30, 2005

This research was funded by two grants: Sigma Theta Tau, Alpha Tau Chapter Research Award, and the Rutgers College of Nursing Alumni Dorothy J. DeMaio Research Award.

The author acknowledges the support and guidance of Adela Yarcheski, PhD, FAAN, Noreen E. Mahon, PhD, FAAN, and MaryAnn Scoloveno, EdD, RN in the conduct of this research.

Abstract

Background: Literature suggested that there was a need to study a broadly conceived variable of positive health practices in pregnant women and to examine theoretically-related variables that help to explain positive health practices in pregnant women.

Objective: The purpose of this study was to examine the association between social support and positive health practices in pregnant women and to further test this relationship by examining two mediational variables, perceived health status and optimism.

Method: A convenience sample of 152 pregnant women attending childbirth education classes completed the four study instruments and a demographic data sheet.

Results: Social support was positively related to positive health practices; this relationship was basic to both mediational models. In the first mediational model, social support was positively related to perceived health status, and perceived health status was positively related to positive health practices, but perceived health status was not a complete mediator of the social support-positive health practices relationship, as determined by regression analyses. In the second mediational model, social support was positively related to optimism, optimism was positively related to positive health practices, but optimism was not a complete mediator of the social support-positive health practices relationship, as determined by regression analyses.

Discussion: Positive health practices in pregnant women are positively related to social support, perceived health status, and optimism. In terms of theory building, neither perceived health status or optimism help to explain the social support-positive health practices relationship. Replication of this study with a minority sample is one recommendation for future study.

Key Words: Optimism, perceived health status, positive health practices, pregnant women, social support.

Recent national data indicate that the United States is ranked 34th among industrialized countries for infant mortality and morbidity (U.S. Department of Health and Human Services, 2002). Prenatal care and the health practices of pregnant women most likely have some bearing on this disturbing statistic. Researchers have an obligation to create a body of knowledge about positive health practices that can be readily translated to practice with pregnant women.

Positive health practices in pregnant women are defined as those health behaviors "that may affect her health, the health of the fetus, or the pregnancy's outcome" (Lindgren, 2001, p. 209). Lindgren's (2001, 2003, 2005) conceptualization and measurement of positive health practices have facilitated research of health behaviors in pregnant women, but the science is in its infancy. More research regarding positive health practices in pregnant women is needed to expand the knowledge base. The purpose of this study was to examine the association between social support and positive health practices in pregnant women and to further test this relationship by examining two mediational variables, perceived health status and optimism.

Mediational Models

Pregnant women are expected to engage in positive health practices similar to those practiced in the general population, such as exercise and rest, as well as in pregnancy-related health practices, such as adequate weight gain and prenatal care (Condon, 2003). Positive health practices for pregnant women, as defined by Lindgren (2001), encompass both and include exercise, nutrition, relaxation, safety, less substance use, safer sex practices, and health care.

Social support has been theorized to contribute to positive health practices. Weiss (1974) defined social support as consisting of the relational provisions of attachment, social integration, opportunity for nurturance, reassurance of worth, a sense of reliable alliance, and the obtaining of guidance from trusted individuals. As early as 1977, Langlie suggested that social support

positively influences preventive health behaviors, such as seat belt use, exercise, good nutrition, medical and dental care, screening exams, and immunizations. Langlie explained that information and feedback received in socially supportive relationships positively affects health practices. For Umberson (1987), social relationships facilitate good health behaviors, directly and indirectly. Directly, family members tell each other to engage in good health behaviors and to avoid risky behaviors; they regulate health behaviors through interventions, such as managing nutrition and diets. Indirectly, family members role model and support each other in healthy behaviors, and encourage self-enforcement of norms for healthy behaviors. Adler and Matthews (1994) suggested that social support encourages positive health behaviors, such as exercise and a healthy diet, and discourages negative behaviors, such as alcohol use and smoking. Research has supported the relationship between social support and selected aspects of positive health practices, such as limiting smoking and alcohol consumption in pregnant women (Aaronson, 1989; Albrecht & Rankin, 1989; Coleman & Williamson, 1989; Schaffer & Lia-Hoagberg, 1997). No studies have examined the relationship using a comprehensive measure of positive health practices in pregnant women, but a moderately strong and positive relationship between social support and positive health practices has been substantiated in adults (Mahon, Yarcheski, & Yarcheski, 1998; McNicholas, 2002; Muhlenkamp & Sayles, 1986). As the basic relationship for the two mediational models, social support was hypothesized to be positively related to positive health practices in pregnant women. Mediators that help to explain the relationship in pregnant women were identified in the theoretical literature. They are health and optimism.

Theorists have proposed that social support is antecedent to health, explaining that social support has a direct beneficial effect on health, while the absence of social support is a risk factor for poor health (House, 1981; House, Landis, & Umberson, 1988). As explained by House

(1981), social support enhances health because it meets important human needs for social contact, security, approval, belonging, and affection. In this study, perceived health status is a representative variable for health and is defined as an individual's subjective assessment of current health, prior health, health outlook, resistance to illness, and general health worries or concerns (Davies & Wares, 1981). Research has supported a positive relationship between social support and perceived health status in adolescents (Rew, Fouladi, & Yockey, 2002; Yarcheski, Mahon, & Yarcheski, 1997), and older adults (Boland & Cappeliez, 1997), but no studies have examined the relationship in pregnant women.

Positive health practices have been postulated to be an outcome of perceived health status (Pender, 1996, 2002). As Pender (1996) explained, perceived health status or "feeling good" may be a motivator for action. Thus, perceived health status plays a role in the frequency and intensity of positive health practices carried out by individuals. Recently, Pender (2002) conceptualized perceived health status as a personal factor influencing positive health practices. Research has supported a positive relationship between perceived health status and positive health practices in adults (Settersten & Lauver, 2004), and older adults (Boland & Cappeliez, 1997); no studies have examined this relationship in pregnant women.

In the first mediational model, social support was hypothesized to be positively related to perceived health status, and perceived health status was hypothesized to be positively related to positive health practices. Perceived health status was hypothesized to mediate the relationship between social support and positive health practices meaning that--when perceived health status is controlled for statistically--the relationship will no longer be statistically significant.

Scheier and Carver (1985) defined optimism, the second mediator in this study, as the disposition to believe that one will experience good outcomes. Theorists have proposed that

social support is antecedent to optimism (Peterson & Bossio, 1991; Taylor, 1989). As Taylor explained, social support provides encouragement, affirmation, and support, all of which promote optimism. According to Peterson and Bossio, optimism is influenced by social support through the provision of satisfying relationships. Research has supported the positive relationship between social support and optimism in adult women (Boland & Cappeliez, 1997), in middle-aged adults (McNicholas, 2002), and in pregnant and parenting adolescents (Klaw & Rhodes, 1995), but no studies have examined this relationship in pregnant adult women.

Positive health practices have been postulated to be an outcome of optimism. Scheier and Carver (1992) have suggested that optimism affects an individual's actions, including health behaviors. As explained by Taylor (1989), optimists look toward the future, identify possible risks, and take steps to minimize the risks, especially those within their control, through the practice of good health habits. Research has supported the positive relationship between optimism and positive health practices in adults (McNicholas, 2002; Steptoe et al., 1994), but no studies have examined this relationship in pregnant women.

In the second mediational model, social support was hypothesized to be positively related to optimism, and optimism was hypothesized to be positively related to positive health practices. Also, optimism was hypothesized to mediate the relationship between social support and positive health practices meaning that--when optimism is controlled for statistically--the relationship will no longer be statistically significant.

Method

Sample

A convenience sample of pregnant women meeting the delimitations of this study was recruited from childbirth education classes in three settings. The sample was delimited to

pregnant women between the ages of 18 and 45 who could read and comprehend English and who were experiencing a relatively uncomplicated pregnancy. Using an alpha of .05 and a power of .81 (beta = .19) and a small to medium effect size of $f2 = .07$, a sample of 150 pregnant women was required for testing the mediational models using multiple regression (Cohen, 1988).

Of the 206 pregnant women approached to participate in the study, 152 completed the study instrument packet. The 152 respondents in the final sample ranged in age from 20 to 40 years ($M = 30.82$, $SD = 3.95$). About 97% of the women were currently married. Relative to race, about 78% were Caucasian, while 19% were Asian, African American, or Latino: about 3% reported "other." Educationally, about 4% of the respondents were high school graduates, 15% attended some college or vocational school, 8% had associate degrees, 47% had a bachelor's degree, 24% had a master's degree, and 2% had a doctoral degree. Of the 152 participants, about 18% were not working, 7% were working part-time, and 75% were working full-time.

Using the occupational portion of Hollingshead's Four Factor Index of Social Status (1975) as a guideline to categorize the following information, the occupations of the participants ranged from unskilled service workers (4.5%), to semi-skilled workers (1.3%), to manual and craft workers (.6%), to clerical/sales workers (10.8%), to technical/semi-professional workers and office managers (21.7%), to low-level managers, owners of small businesses and teachers (35.7%), to mid-level managers and professional positions (15.3%), to senior managers, CEOs, and high level professionals (1.3%); 8.8% of the participants did not respond to this question.

The gestational age of the 152 participants ranged from 21 to 40 weeks ($M = 31.94$, $SD = 3.22$). Using single-item questions, 40 women reported being depressed prior to becoming pregnant, and 16 reported being currently depressed.

Instruments

The Health Practices Questionnaire-II

The Health Practices Questionnaire-II (HPQ-II) is a 34-item self-report questionnaire that measures the positive health practices of pregnant women (Lindgren, 2003, 2005), which was developed from the original 19-item HPQ (Lindgren, 2001). The HPQ-II consists of 17 items with a 5-point summated rating scale ranging from 1 (*never*) to 5 (*always*), and 17 items with a 5-point summated rating responses that vary per question asked (Lindgren, 2001). After reverse scoring 13 negatively worded items, the possible range of scores is 34 to 170. Higher scores indicate the practice of more positive health practices during pregnancy.

According to Lindgren (2001), the original HPQ was developed from a review of the literature. Lindgren reported psychometric properties for the HPQ. Because of shortcomings noted with use of the HPQ, Lindgren (2005) further developed the instrument, resulting in the 34-item HPQ-II. Extensive evidence for validity for the HPQ-II, involving three studies, has been reported by Lindgren (2005). In the first study, using content experts, the content validity index was calculated at .83. In the second study, content validity was assessed by asking a sample of pregnant women to match items on the HPQ-II to behavioral objectives for self-care during pregnancy. Agreement between the items and objectives was 90% to 100%. In the third study, construct validity was demonstrated when the HPQ-II correlated positively and appreciably with several measures of prepregnancy health practices, as well as an instrument measuring attitudes of pregnant women towards their pregnancy and their babies.

The coefficient alpha reliabilities for the HPQ-II were .74 in a sample of 252 pregnant women from diverse socioeconomic backgrounds (Lindgren, 2003), and .81 in a sample of 386 pregnant women (Lindgren, 2005). In the present study, the reliability analysis excluded two

items from the 34-item HPQ-II because of lack of variability. The coefficient alpha obtained for the 32-item HPQ-II was .64.

Personal Resource Questionnaire85--Part 2

The Personal Resource Questionnaire85--Part 2 (PRQ85--Part 2) is a self-administered instrument designed to measure perceived social support (Weinert, 1987), as defined by Weiss (1974). The PRQ85--Part 2 is a 25-item tool measured on a 7-point summated scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). After reverse scoring 5 items, scores can range from 25 to 175; higher scores indicate a higher level of perceived social support.

The original PRQ--Part 2, developed by Brandt and Weinert (1981), has extensive evidence of content, predictive, and construct validity and acceptable coefficient alpha reliabilities. Weinert (1987) made minor changes to the original PRQ--Part 2 and provided evidence of content validity for the revised instrument, labeled the PRQ85--Part 2. Weinert (1987) provided further evidence of validity for the PRQ85--Part 2 by performing factor analysis on combined data of 282 adults. Using principle components analysis with oblique rotation, Weinert accepted a three-factor solution, explaining a total of 43.4% of the variance. The factors are: Intimacy/Assistance (Factor 1), Reciprocity (Factor 2), Integration/Affirmation (Factor 3).

Relative to reliability of the PRQ85--Part 2, Orshan (1999) reported a .84 for 63 primagravida adolescents, aged 13 to 17. McNicholas (2002) reported a .90 in 202 middle-aged adults, aged 40 to 60 years. In the present study, the coefficient alpha was .90.

The General Health Rating Index

The General Health Rating Index (GHRI) is a self-report, 22-item instrument measuring general health perceptions (Davies & Ware, 1981). Davies and Ware developed the GHRI from the 26-item Health Perceptions Questionnaire (HPQ). The GHRI has a 5-point summated scale,

from 1 (*definitely false*) to 5 (*definitely true*). After reverse scoring selected items, scores can range from 22 to 110, with higher scores indicating a more positive perceived health status.

For content validity, Davies and Ware (1981) developed the HPQ based on literature reviews and studies of general health ratings. The GHRI measures five of the six general health perception concepts on the HPQ: current health, prior health, health outlook, resistance to illness, and health worry/concern.

Davies and Ware (1981) provided evidence of concurrent validity for the GHRI by correlating the tool with measures of the health-related constructs such as current health, personal ratings of health, pain, and prior health. Statistically significant correlations in the expected direction were found between the GHRI and the health-related measures, ranging from $r = -.23$ to $r = .66$. Davies and Ware provided evidence of construct validity for the GHRI using principle components factor analysis with data from 4717 individuals.

Davies and Ware (1981) reported a coefficient alpha reliability for the GHRI of .89 in a sample of 4,717 individuals aged 14 to 67. Mahon, Yarcheski, and Yarcheski (1997) reported a coefficient alpha of .84 in a sample 69 of young adults, aged 22 to 32. The coefficient alpha in the present study was .87.

Life Orientation Test

Scheier and Carver (1985) developed The Life Orientation Test (LOT) to assess dispositional optimism, which is defined as a generalized expectancy that good things will happen. The LOT is a 12-item self-report instrument consisting of eight items, plus four filler items eliminated from the statistical analysis. Participants respond to a 5-point summated scale ranging from 4 (*strongly agree*) to 0 (*strongly disagree*). Four of the eight items are reverse scored. Scores can range from 0 to 32, with higher scores indicating higher optimism.

Relative to content validity, Scheier and Carver (1985) developed the initial 16 items of the LOT to assess the generalized outcome expectancies of optimism. After repeated factor analyses, the final version consisted of eight items and four filler items added to disguise the purpose of the test. Following confirmatory factor analysis, Scheier and Carver (1985) stated that the scale may be considered unidimensional. Relative to convergent validity, Scheier and Carver (1985) reported that the LOT was positively correlated with internal locus of control and self esteem, and negatively correlated with hopelessness, depression, and perceived stress.

Scheier and Carver (1985) reported a coefficient alpha reliability of .76 for the LOT in a sample of 624 college students and test-retest reliability of .79 over a four-week interval. Rini, Dunkel-Schetter, Wadhwa, and Sandman (1999) reported a .81 in a sample of 230 pregnant women. Lobel, DeVincent, Kaminer, and Meyer (2000) reported a coefficient alpha of .86 in a sample of 129 pregnant women. In the present study, the coefficient alpha was .79.

Procedure

Data were collected from pregnant women attending childbirth education classes after Institutional Review Board approval was obtained from the investigator's university and the three data collection sites. Potential participants were approached in a group by this investigator or a certified research assistant when they arrived for class. Those who agreed to participate signed a written informed consent and responded to the instrument packet, ordered as follows: (a) the demographic data sheet, (b) HPQ-II, (c) PRQ85--Part 2, (d) GHRI, and (e) the LOT.

Initially, data collection took place prior to the scheduled childbirth education classes. Because data collection encroached upon the time scheduled for class, the procedure was changed. Potential participants were approached before class. Participants agreeing took the

instrument packets home to complete; all returned their packets the following week. Approximately 70% of the participants followed this latter procedure.

Results

Descriptive statistics are presented in Table 1. The five bivariate hypothesized relationships were tested using the Pearson Product-Moment correlation coefficient with a one-tailed test of significance. The two mediational hypotheses were tested using multiple regression analyses, specified by Baron and Kenny (1986).

Basic to both mediational models, the hypothesized positive relationship between social support and positive health practices in pregnant women, was supported ($r = .41$, $p = .01$). The mediational models were each tested using three regression analysis specified by Baron and Kenny (1986). The first equation regressed the mediator (perceived health status or optimism) on the independent variable (social support); the second regressed the dependent variable (positive health practices) on the independent variable (social support); and, the third regressed the dependent variable on the independent variable and the mediator. According to Baron and Kenny, the following conditions must be met for mediation. The independent variable must affect the mediator in the predicted direction in the first equation, and the dependent variable in the predicted direction in the second equation; the mediator must affect the dependent variable in the predicted direction in the third. If these conditions are met, the effect of the independent variable on the dependent variable must be less in the third than in the second equation. Perfect mediation would hold if the independent variable had no effect on the dependent variable when the mediator is controlled for in the third equation.

In the first mediational model, the hypothesized positive relationship between social support and perceived health status, was supported ($r = .33$, $p = .01$). The hypothesized positive

relationship between perceived health status and positive health practices, was supported ($r = .34$, $p = .01$).

The first mediational hypothesis stating that, when perceived health status is controlled for, the relationship between social support and positive health practices will not be statistically significant in pregnant women, was not supported. The results are presented in Figure 1. In the first equation, social support positively influenced perceived health status in the predicted direction, $F(1, 150) = 18.54$, $p < .001$, explaining 11% of the variance in perceived health status. In the second equation, social support positively influenced positive health practices, $F(1, 150) = 30.46$, $p < .001$, explaining 16.9% of the variance in positive health practices. In the third equation, perceived health status positively influenced positive health practices, $t = 2.92$, $p < .004$, explaining 5% of the variance in positive health practices. In this third equation, including both social support and perceived health status, social support added 11.3% to the explained variance in positive health practices, beyond the 5% contributed by perceived health status. With perceived health status present, the proportion of variance in positive health practices accounted for by social support was reduced from 16.9% to 11.3% and the standardized regression coefficient decreased from .41 to .34. There was a loss of 5.6% of the explained variance in positive health practices due to the partial mediation of perceived health status, and social support still had a statistically significant influence on positive health practices in the third equation ($t = 4.37$, $p = .001$) indicating that perceived health status is not a complete mediator in the social support-positive health practices relationship.

On a post-hoc basis, the indirect effect of the independent variable on the dependent variable via the mediator was assessed using the Sobel test which indicated that the t value was

statistically significant for a one-tailed test of significance ($t = 2.20$, $p = .025$). Social support had an indirect effect on positive health practices through the mediator of perceived health status.

In the second model, the hypothesized positive relationship between social support and optimism in pregnant women, was supported ($r = .44$, $p = .01$). The hypothesized positive relationship between optimism and positive health practices, was supported ($r = .35$, $p = .01$).

The second mediational hypothesis stating that, when optimism is controlled for, the relationship between social support and positive health practices will not be statistically significant, was not supported. The results are presented in Figure 2. In the first equation, social support positively influenced optimism in the predicted direction, $F(1, 150) = 35.41$, $p = < .001$, explaining 19.1% of the variance in optimism In the second equation, social support positively influenced positive health practices $F(1, 150) = 30.46$, $p = < .001$, explaining 16.9% of the variance in positive health practices. In the third equation, optimism had a statistically significant influence on positive health practices in the predicted direction, $t = 2.55$, $p = .012$ and explained only 4.2% of the variance in the positive health practices. In this third equation, including social support and optimism, social support added 10.2% to the explained variance in positive health practices, beyond the 4.2% contributed by optimism. With optimism present, the proportion of variance in positive health practices accounted for by social support was reduced from 16.9% to 10.2% and the standardized regression coefficient decreased from .41 to .32**.** Social support still had a statistically significant influence on positive health practices in the third equation ($t = 3.94$, $p < .001$); the loss of 6.7% of the explained variance of positive health practices was due to the partial mediation of optimism. The results indicate that optimism is not a complete mediator in the social support-positive health practices relationship. A post hoc Sobel test revealed a statistically significant t value for a one-tailed test of significance ($t = 2.35$,

p = .025) indicating that social support had an indirect effect on positive health practices through optimism.

Additional findings indicated that age, education, occupation, work and marital status, and race were not related to positive health practices. The inverse correlation between being depressed prior to pregnancy and positive health practices approached significance (r = -.15, p = .06). The inverse correlation between being depressed currently and positive health practices was appreciable (r = -.18, p = .03), consistent with findings reported by Lindgren (2001).

Discussion

As predicted, social support was positively related to positive health practices in pregnant women, which supports theories linking the two variables (Adler & Matthews, 1994; Langlie, 1977; Umberson, 1987). The more social support they perceived, the more pregnant women engaged in good health practices such as exercise, nutrition, relaxation, safety, less substance use, safer sex practices, and health care. This finding extends earlier research reporting a positive relationship between social support and selected aspects of health practices, such as limiting alcohol and caffeine consumption (Aaronson, 1989; Albrecht & Rankin, 1989; Coleman et al., 1989; Schafer & Lia-Hoagberg, 1997) and provides evidence that social support is positively related to a broader conception of positive health practices in pregnant women.

As predicted, social support was positively related to perceived health status, supporting theory linking the two variables (House, 1981; House et al., 1988). The more social support they reported, the more pregnant women perceived a better health status. The present finding in pregnant women is consistent with earlier research that reported a positive relationship between social support and perceived health status in adolescents (Rew et al., 2002; Yarcheski et al., 1997) and older adults (Boland & Cappeliez, 1997) and adds to the body of knowledge.

As predicted, perceived health status was positively related to positive health practices in pregnant women, supporting theory linking the two variables (Pender, 1996, 2002). As expected, the better they perceived their health status, the more health practices carried out by pregnant women. The present finding in pregnant women extends earlier research reporting a positive association between perceived health status and positive health practices in adults (Settersten & Lauver, 2004) and adult women (Boland & Cappeliez, 1997).

The first mediational hypothesis stating that, when perceived health status is controlled for, the relationship between social support and positive health practices will not be statistically significant, was not supported. Perceived health status was not a complete mediator in that the relationship between social support and positive health practices diminished somewhat, but remained statistically significant. Baron and Kenny (1986) stated that to demonstrate mediation, strong relationships must be established among all three bivariate relationships in the model. Although statistically significant associations were demonstrated among the three relationships in the model, the correlations were not particularly strong. One methodological problem that might have affected the strength of two of the three relationships in the model was the coefficient alpha ($\alpha = .64$) found with the HPQ-II, which may have compromised the testing of the model

As predicted, a positive relationship was found between social support and optimism in pregnant women, supporting theories linking the two variables (Peterson & Bossio, 1991; Taylor, 1989). The more social support they perceived, the more optimism reported by pregnant women. This finding in pregnant adult women extends earlier research reported in adult women (Boland & Cappeliez, 1997), middle-aged adults (McNicholas, 2002), and in adolescents, a majority of whom were pregnant (Klaw & Rhodes, 1995).

As predicted, a positive relationship was found between optimism and positive health practices in pregnant women, supporting theories linking the two variables (Scheier & Carver, 1992; Taylor, 1989). The more optimistic they were, the more pregnant women practiced positive health behaviors. This finding in pregnant women is consistent with earlier research in adults (McNicholas, 2002; Steptoe et al. 1994) and adds to the body of knowledge in the area.

The second mediational hypothesis stating that, when optimism is controlled for statistically, the relationship between social support and positive health practices will not be statistically significant, was not supported. Optimism was not a complete mediator in that the basic relationship between social support and positive health practices diminished somewhat, but remained statistically significant. Although statistically significant bivariate correlations were demonstrated among the three relationships in the model, a prerequisite for mediation, the correlations were not particularly strong. Again, the coefficient alpha ($\alpha = .64$) found with the HPQ-II in the present study may have attenuated the strength of two of the three relationships in the model, compromising the testing of the model (Baron & Kenny, 1986). Another possible explanation, suggested by Baron and Kenny, is that a basic relationship with psychosocial variables probably has multiple mediators rather than one single dominate mediator, each of which significantly decrease, rather than eliminate, the basic relationship. Unfortunately, Baron and Kenny fail to define what a significant reduction in a basic relationship is, due to a mediator.

Social support, perceived health status, and optimism were positively and moderately related to positive health practices in this study, which was the first to examine these relationships in pregnant women using a comprehensive measure of positive health practices. In practice, nurses should monitor the social support perceived by pregnant women since the results clearly indicated that social support has some bearing on the practice of good health behaviors

directly, and indirectly through perceived health status and optimism. Nurses also need to assess perceived health status since "feeling good" motivates pregnant women to practice positive health behaviors. Further, nurses need to assess the general disposition of the pregnant women, paying special attention to those who are not optimistic and thus limit positive health behaviors.

The present study needs to be replicated in a minority sample, with consideration given to cultural differences that might exist in positive health practices. Positive health practices also need to be compared across samples of pregnant women whose chronological ages represent different developmental stages. Lastly, research is needed to document the relationship between positive health practices in pregnant women and their infant's health.

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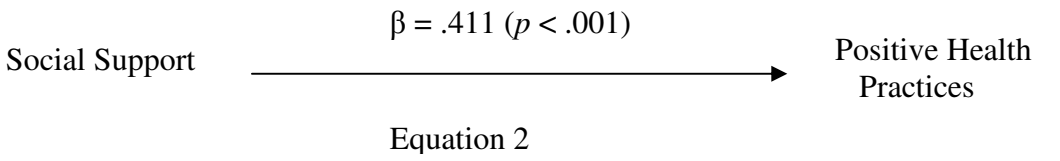
Table 1.

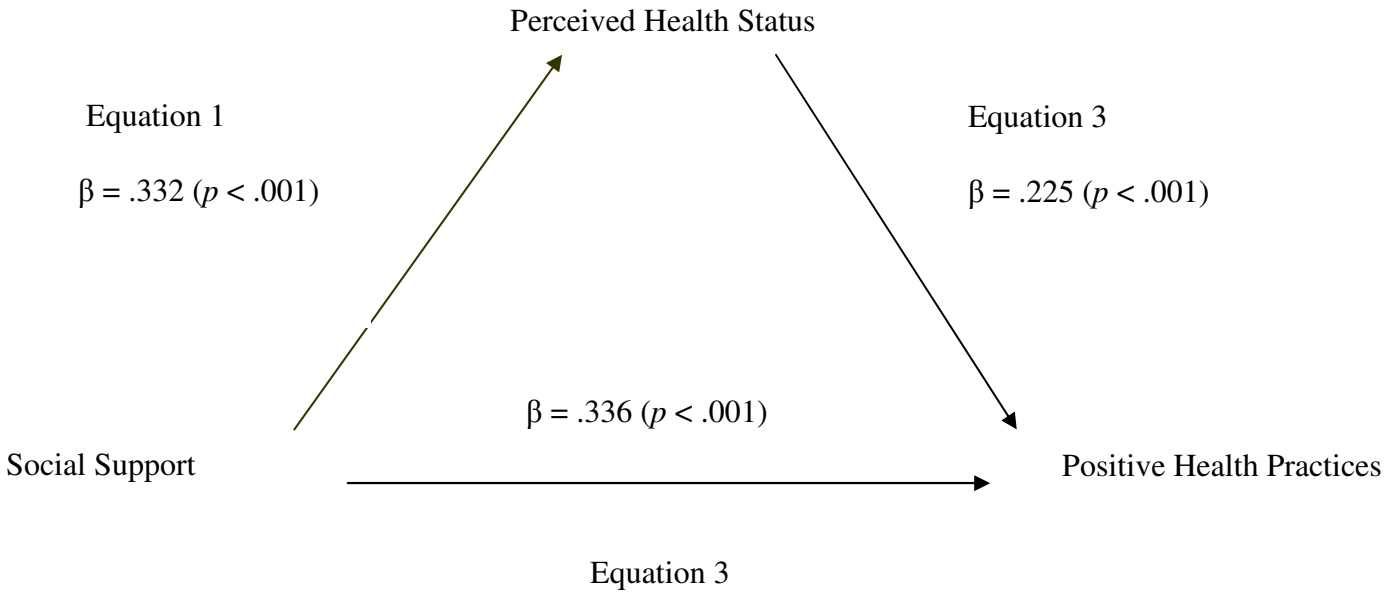
Descriptive Statistics of Study Variables (N = 152)

Variable	Range	*M*	*Mdn*	*SD*
Positive Health Practices	127-166	150.99	151	7.49
Social Support	104-175	153.95	156	14.52
Perceived Health Status	35-107	86.07	87	10.93
Optimism	4-32	20.95	21	4.24

Figure 1. Results of Testing the Mediational Model with Perceived Health Status.

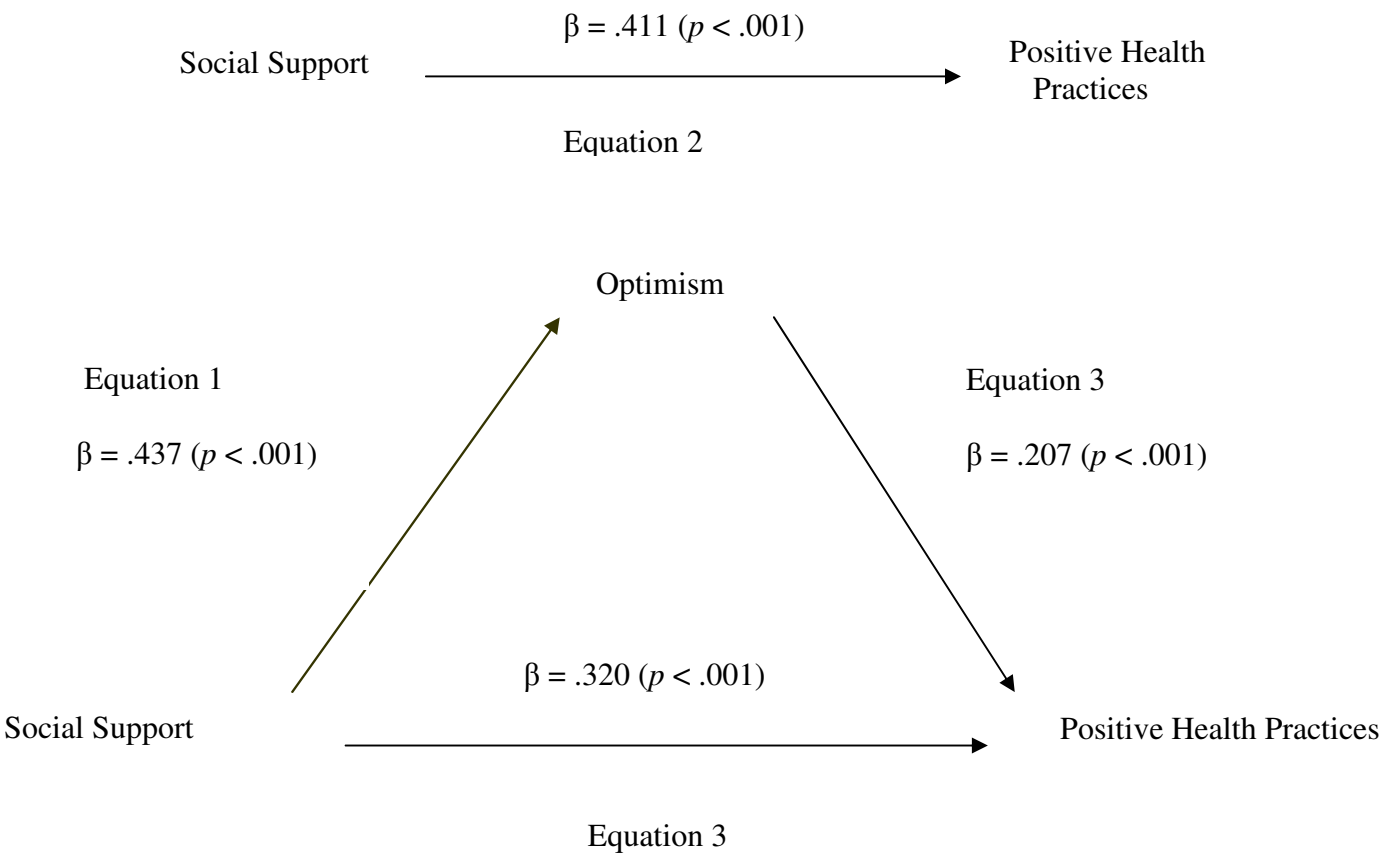


Equation 2



Equation 3

Figure 2. Results of Testing the Mediational Model with Optimism.


β = .411 (p < .001)
Social Support
Positive Health Practices
Equation 2
Optimism
Equation 1
β = .437 (p < .001)
Equation 3
β = .207 (p < .001)
β = .320 (p < .001)
Social Support
Positive Health Practices
Equation 3