The Relationships among Perceived Health Status, Perceived Self-Efficacy, and Health Promoting Behaviors of Bangladeshi Postpartum Women

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ABSTRACT

The postpartum period is most crucial for the women as they are recovering from pregnancy-related effects and childbirth. In Bangladesh, there is a large proportion of women who have suffered from severe complications during a postpartum period. These complications can be prevented and controlled by engaging women in health promoting behaviors. The aims of this descriptive correlational study were: to examine the relationships among perceived health status, perceived self-efficacy, and health promoting behaviors; and to describe the levels of perceived health status, perceived self-efficacy, and health promoting behaviors among postpartum women. One hundred and twenty postpartum women were selected purposively from one Medical College Hospital in Dhaka, Bangladesh. Data were collected by using structured questionnaires consisting of four parts: the subject’s demographic characteristics; perceived health status; perceived self-efficacy; and health promoting behaviors. The data were analyzed by using descriptive statistics and Spearman’s correlation coefficients (rho). The results revealed that total scores of perceived health status, perceived self-efficacy (including both subscales of efficacy expectation and outcome expectations), and health behaviors were at high levels. Perceived health status and perceived self-efficacy were significant with positive moderate and high correlation with the health promoting behaviors of postpartum women. The findings of this study could be beneficial for enhancing the health and well being of postpartum women through encouraging health promoting behaviors. However, replicated studies with large samples size in rural areas, or with other groups of postpartum women with complications, are needed.

Key words: postpartum women, health promoting behaviors, self-efficacy, health status
Background and significance of the problem

The maternal mortality rate in Bangladesh has ranged from 3.2 to 3.8 per 1000 live births (Islam, Hossain, Islam, & Haque, 2005; Parkhurst & Rahman, 2007; Pitchforth, Teijlingen, Graham, Dixon-Woods, & Chowdhury, 2006). Most of the maternal deaths occur during the postpartum period and most maternal morbidities also arise at that time (Li, Fortney, Kotelchuck, & Glover, 1996). Four out of five Bangladeshi women may have experienced at least one morbidity, such as postpartum hemorrhage (PPH), retained placenta, inversion of uterus, postpartum eclampsia, puerperal sepsis, postpartum psychosis, wound infection, and a burst abdomen that may be from the caesarean section. A large proportion of women who suffer from severe complications are admitted to the hospital (Shahnaz, 2008).

There were some women did not seek care when they experienced obstetric complications because of the cost involved. Some of them thought that the treatment was unnecessary or the condition was not serious. In addition, other reasons included problems with transportation and access issues, family opposition, and concerns related to the quality of service. In terms of women’s knowledge of life threatening obstetric complications, only a third sought treatment from a medically qualified provider. The other two-thirds either did not seek care or sought care from an unqualified provider (Koenig et al., 2007). This suggests a much higher level of awareness of the need for care.

Along with the new tasks of maternal roles and changes in the body from pregnancy related effects and childbirth, there have been changes in relationships, economic demands, and social support needs (Hung & Chung, 2001; Makumbe, 2001). These changes may result in health problems that may adversely affect both physical and mental health during the postpartum period (Bahadoran, Azimi, Valiyan, & Ahmadi, 2009; Cheng & Li, 2008; Hung & Chung, 2001). Thus, postpartum check-ups have been documented as one of the promotional and preventive strategies through which women are empowered to take responsibility for their own health (Makumbe, 2001). However, this kind of care for mothers and infants has been uncommon in Bangladesh (Koenig et al., 2007).

Women view their postpartum period as a healthy, normal process, or they view it as a condition warranting close medical supervision, a potential life threatening or dangerous event. These are all related to how the women perceived their health. Those who believe that are in better health are more likely to maintain and perform health promoting behaviors (HPBs) (Capik, 1998). The impact of the perceived health status on HPBs has been examined in several studies. For example, Wilson (1991) found that perceived health status had a strong relationship to mothers’ HPBs. Other studies have also reported a positive relationship
between perceived health status and HPBs among diverse healthy populations (Duffy, 1997). However, Garcia and colleagues (1995) and Conn (1998) employed path analysis to indicate the relationships of perceived health status to the exercise behaviors of youths and older adults. It was found that perceived health status had an indirect, but not direct, relationship to the exercise behaviors of their study population. Thus, there are controversial elements in the studies of the variables of perceived health status.

Women are motivated from pregnancy through the postpartum period to practice health behaviors to promote well-being for themselves and their fetuses or babies. To generate such motivation, psychological self-efficacy is essential to help a woman recognize how well she can handle and/or deal with their new circumstance in relation to HPBs (Misawa, Oe, Saimon, & Endo, 2007). For example, a study has identified exercise adherence as the main key to the effectiveness of pelvic floor muscle exercise. In addition, perceived self-efficacy has proved to be an influential predictor of adherence to physical activity and exercise in general (Chen, 2004).

HPBs are actions or behaviors that improve or promote one’s health or well-being. Sriyuktasuth (2002) conducted a study to identify HPBs in Thai women with systemic lupus erythematosus (SLE). The perceived health status directly related to the perceived self-efficacy, and it also had a significant indirect path through perceived self-efficacy to HPBs. However, there was no significant direct path from perceived health status to the HPBs. In addition, perceived self-efficacy had a significant direct relationship to the HPBs. One study explored the effects of perceived self-efficacy and perceived health status on the maintenance of HPBs by women. It was found that the effect of these factors on particular health promoting behaviors were smaller in magnitude and contributed little to the explanation of the specific HPBs or their stability (Bottorff, Johnson, Ratner, & Hayduk, 1996).

To sum up, perceived health status and perceived self-efficacy are related to the HPBs; however, the studies reviewed show that the results in relation to the HPBs have been inconsistent. Therefore, the purposes of this study were to examine the levels and relationships among perceived health status, perceived self-efficacy, and HPBs of Bangladeshi postpartum women. It is hoped that health care providers will be able to use the results of this study as guidelines for enhancing practicing HPBs by postpartum women in their care.
Objectives

The aims of the study were to describe the levels of perceived health status, perceived self-efficacy, and HPBs, and to examine the relationships among perceived health status, perceived self-efficacy, and HPBs of Bangladeshi postpartum women.

Technical Terms

Perceived health status was the self assessment of the level of their current health status by postpartum women. It was measured by the Perceived Health Status Questionnaire. The higher scores indicated the higher level of perceived health status.

Perceived self-efficacy was the self assessment of the level of confidence of a postpartum woman of her perceived ability to perform a particular action or behaviors that produced a desire outcome. It was measured by the Perceived Self-Efficacy Questionnaire. The higher scores indicated the higher level of perceived self-efficacy.

Health promoting behaviors referred to the level of health promoting activities regarding postpartum self-care were perceived by Bangladeshi postpartum women. It was measured by the Health Promoting Behavior Questionnaire. The higher scores indicated the higher level of HPBs.

Framework of the study

The conceptual framework of this study was based on the revised Health Promotion Model (HPM) (Pender, Murdaugh, & Parsons, 2006). This model is an attempt to depict the multidimensional nature of persons interacting with their interpersonal physical environments as they pursue health. Perceived health status is one of the psychological factors that can either directly or indirectly affect HPBs. It reflects an individual’s assessment of their current state of health. Thus perceived health status may be a determinant of the frequency and intensity of the HPBs, and the more positive the perception of health, the more likely an individual, such as a Bangladeshi postpartum woman, is to engage in HPBs.

Perceived self-efficacy is behavior-specific cognition and affect. It has major motivational significance. This variable constitutes a critical core for intervention because it is subjected to modification through nursing actions. It is influenced by activity related affect, the more positive the affect, the greater is the perception of efficacy.

Health promoting behavior is ultimately directed toward attaining positive health outcomes for the client. The HPBs of postpartum women are essential for preventing illness and for improving health through their life-spans. There are six dimensions in HPBs health
responsibility; physical activity; nutrition; interpersonal relationship; spiritual growth; and stress management (Chen, Kuo, Chou, & Chen, 2007; Pender et al., 2006; Stark & Brinkley, 2007). The variables of perceived health status and perceived self-efficacy are anticipated to make a contribution to the behavior outcomes of Bangladeshi postpartum women. The conceptual framework of this study is shown in Figure 1.

![Conceptual framework of the study](image)

**Research Methodology**

A descriptive design was conducted. A purposive sampling method was used for recruiting eligible samples in this study. The subjects were the primiparous postpartum women. They had delivered a single, healthy term baby without complications during delivery and in the postpartum period. They had brought the child for immunization at the Expanded Program of Immunization Center in Chittagong Medical College Hospital, Bangladesh. The sample size of this study was estimated by using power analysis. The accepted minimum level of significance (α) to estimate the number of sample size was .05 with power of .80 (1-β) and the effect size was .30. This value of α and 1-β is the conventional standard for most nursing studies (Polit & Beck, 2008). Eighty-eight samples at least were needed. However, 120 samples were approached as required to eliminate missing data and this led to an adequate sample for the current study.

**Instruments**

The following instruments for the current study were developed by the researcher and were based on a literature review.

The perceived health status instrument consisted of general physical health and mental health perceptions, and contained 15 items. A higher score indicated a higher level of perceived health status. The Cronbach’s alpha coefficient for the scale was .91.
The perceived self-efficacy instrument was composed of 47 items of efficacy expectations and outcome expectancy using five Likert-scales. The higher score indicated a higher level of perceived self-efficacy. The internal consistency of the scale was .97.

Health promoting behaviors were made up of six dimensions: health responsibility; physical activity; nutritional management; interpersonal relationship; spiritual growth; and stress management. The scale was made up of a set of 38 items with four Likert-scales. A higher score indicated a higher level of health promoting behavior. The Cronbach’s alpha for the whole scale was .94.

**Procedure**

The subjects were approached to participate in the study. They were informed about the objectives of the study and each subject’s rights. The detailed information about the study was given to each mother before obtaining consent for participation. Both verbal and written consent were obtained before the interview.

The data was collected by face to face interview using a structured questionnaire for the participants who were unable to read and write. Subjects who were able to read and write the Bengali language were allowed to complete the questionnaires by themselves. If the participants could not understand something, the researcher explained and clarified and gave more information. Data collection was undertaken in a private place, from 8.00 am to 2.00 pm during official day-time (6 days in a week). The time spent for the interview with each subject was not more than one hour.

**Ethical considerations**

The study was approved by the Institutional Review Board of the Faculty of Nursing, Prince of Songkla University, Thailand, and the Director of the Nursing Service in Bangladesh. Participants were assured that they had the right to refuse to participate in the study at any time. Identities of all subjects were coded in order to maintain confidentiality and anonymity.

**Data analysis**

Data were analyzed by using a computer software program. Assumptions underlying each statistical analysis were evaluated to detect for the violation of assumptions that would lead to bias in the study’s result. The data showed that they were not in a normal distribution, therefore Spearman’s rho was carried out to accomplish the specific aims of the relationships among these variables.
Results of the study

The participants in this study were 120 postpartum women. Nearly half of them (46.7%) were 20 – 25 years of age. The mean age of the sample was 24.81 years (SD = 3.97, range of 16 to 35). About 55.8% were at college/university level, and 25.8% had completed high school education. There were 53.3% housewives, and 18.4% private employee respectively. Nearly half had an income equal to or less than 10,000 Taka per month (70 Taka equal to 1 US$). Most of them (87.5%) lived in urban areas, more than half lived with their relatives, and 68.4% spent less than half an hour getting to hospital. About 87.6% of them had had antenatal check-ups equal to or more than four times, and 54.2% delivered in a private hospital.

Table 1
Minimum – maximum, median, and level of perceived health status, perceived self-efficacy, and health promoting behaviors of Bangladeshi postpartum women (N = 120)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Min - Max</th>
<th>Median</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived health status</td>
<td>32 – 75</td>
<td>67.00</td>
<td>high</td>
</tr>
<tr>
<td>Perceived self-efficacy</td>
<td>155 – 235</td>
<td>215.50</td>
<td>high</td>
</tr>
<tr>
<td>- Efficacy expectation</td>
<td>73 – 115</td>
<td>107.00</td>
<td>high</td>
</tr>
<tr>
<td>- Outcome expectation</td>
<td>81 – 120</td>
<td>109.00</td>
<td>high</td>
</tr>
<tr>
<td>Health promoting behaviors</td>
<td>94 – 151</td>
<td>138.00</td>
<td>high</td>
</tr>
<tr>
<td>- Health responsibility</td>
<td>12 – 24</td>
<td>23.50</td>
<td>high</td>
</tr>
<tr>
<td>- Physical activity</td>
<td>12 – 20</td>
<td>16.00</td>
<td>moderate</td>
</tr>
<tr>
<td>- Nutritional management</td>
<td>12 – 24</td>
<td>22.00</td>
<td>high</td>
</tr>
<tr>
<td>- Spiritual growth</td>
<td>18 – 28</td>
<td>27.00</td>
<td>high</td>
</tr>
<tr>
<td>- Interpersonal relationship</td>
<td>14 – 28</td>
<td>26.00</td>
<td>high</td>
</tr>
<tr>
<td>- Stress management</td>
<td>14 – 28</td>
<td>25.00</td>
<td>high</td>
</tr>
</tbody>
</table>

Table 1 shows a high level of perceived health status with a median = 67.00, and scores ranging from 32 – 75. There is a high level of perceived self-efficacy with a median = 215.50, and scores ranging from 155 – 235. Both subscale of efficacy expectation (median = 107.00, and scores ranging from 73 – 115), and outcome expectation (median = 109.00, and scores ranging from 81 – 120) were also at high levels. The HPBs and all dimensions were at high levels, except physical activity.
Table 2

Correlation of perceived health status, perceived self-efficacy, and health promoting behaviors of Bangladeshi postpartum women (N = 120)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perceived health status</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perceived self-efficacy</td>
<td>.68**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3. Health promoting behaviors</td>
<td>.61**</td>
<td>.83**</td>
<td>1</td>
</tr>
</tbody>
</table>

**p < 0.01

Table 2 shows the relationships between perceived health status, perceived self-efficacy and the HPBs of Bangladeshi postpartum women. The perceived health status was significantly associated with perceived self-efficacy ($r = .68$, $p < 0.01$). The perceived health status was significantly associated with HPBs ($r = .61$, $p < 0.01$). The perceived self-efficacy was significantly associated with HPBs ($r = .83$, $p < 0.01$).

Discussion

The present study made an attempt to focus on describing the levels of perceived health status, perceived self-efficacy, and HPBs of Bangladeshi postpartum women. It also examined the relationships among perceived health status, perceived self-efficacy, and HPBs. By using a Health Promotion Model (HPM) (Pender et al., 2002), the findings regarding the total scores of the perceived health status were high (Table 1). As presented in the subset of perceived health status scale, most subjects strongly agreed with the physical health (50% to 70%), and also strongly agreed with the mental health (60% to 73%). This finding is consistent with a previous study conducted in Sweden which showed that 91.4% of women at two months postpartum rated their health as good/very good, but the rate decreased to 85.7% at 12 months postpartum (Schytt, Lindmark, & Waldenström, 2005). The possible explanations are related to the characteristics of the subjects. Firstly, the subjects were women who came to the antenatal care (ANC) for check-ups four or more times (87.6%). Visiting an ANC regularly showed the concern about their health and this motivated them to engage in HPBs. They could receive more information about all aspects of HPBs from nurses and physicians to enhance their health.

Secondly, the postpartum mothers lived with their spouses (or in a nuclear family) (30.8%) or lived with their relatives (with their fathers, mothers, husband, and others relatives, or in extended family) (68.4%). They received love, attention, support and concern from their families both in terms of instrumental and mental support. Thus, the family seems to be a resource, which increases and enhances motivation as well as promoting the desire to improve their health.
Thirdly, most of them were between 20 – 25 (46.7%) and 26 – 35 (39.2%) years old. Thus the group was composed largely of mature adults with high responsibility for their health. They could understand the plan of treatment easily, had concern for their health and were highly cooperative with the health care providers (Lambert & Lambert, as cited in Thanomroop, 2000). Fourthly, if the incomes of the subjects in the groups with 10,001 – 30,000 and 30,001 – 50,000 Taka are taken together, more than half of the subjects had a good better socioeconomic status. They would have access to facilities and opportunities that would help them acquire and maintain their health and well-being. Fifthly, this group of postpartum women lived in urban areas (87.5%) and within less than half an hour to hospital (63.3%). Thus they had easy access to health care services if needed.

Lastly, most of them had high school and college/university education. According to Pender and colleagues (2002), education can be important for health. It is an important factor for people making decisions and understanding information about how to take care of themselves and the importance of doing so. They understand the positive outcomes from doing so through discussion with health care professionals, attending health-education programs, or through reading, television, and other media. These women may bring that information into their cognitive processes, interpret and understanding it, and then believe in that information. Finally, they take actions to promote and maintain their health (Sriyuktasuth, 2002). Similarly, another study has found that education was positively related to perceived benefits of self-care in pregnant women (Opasiriwit, as cited in Thanomroop, 2000). A result of the above was that these subjects had a high level of perceived health status.

It was also found that the total scores of the perceived self-efficacy with both subscales of efficacy expectation, and outcome expectation were at high levels (Table 1). Thus there was a possibility that participants in the study had high levels of perceived health status. The perception of health status significantly influences the HPBs through the components of behavior-specific cognitions and affect, as effective cognitive mechanisms linking perceived health status and the HPBs (Pender et al., 2002). Through the cognitive process, the postpartum women who perceived that they were healthy may have believed in the positive outcomes from and their ability to participate in healthful behaviors. As a sequence, the participants in the current study may have been more likely to engage in HPBs to enhance their health.

Moreover, findings from the study show that total scores and subscale scores of HPBs of Bangladeshi postpartum women were at high levels, except the physical activity, which
was at a moderate level (Table 1). Postpartum women’s mental factors including cognition, belief, and affect had an impact on health behavior outcomes. They tended to do HPBs if they anticipated the benefits of doing those activities. This conforms to Pender’s HPM principle that to promote health, individuals must integrate HPBs into a healthy lifestyle, resulting in enhancement of their level of well-being (Pender, 2006). However, the results of this study contrast to the study by Chen et al, (2007), who examined the level of health promoting behaviors and related factors among Taiwanese postpartum women. The results revealed that overall health promoting behaviors were low with exercise rated lowest among the six subscales. In terms of physical exercise, the author recommended the ritual practice of Tso-Yueh-Tzu. This involves a month-long period of rest and recuperation, amidst the activities of daily living in contemporary society. The ritual is perceived as facilitating the mother’s adaptation to new motherhood and, subsequently, to the achievement of health in later life.

Finally, the relationships between perceived health status, perceived self-efficacy, and HPBs are presented in Table 2. These findings confirmed Pender et al, (2006) that perceived self-efficacy is considered one of the major factors in behavior-specific cognitions and affect influencing the performance of HPBs. The persons with high self-efficacy are likely to select appropriate health activities that lead to their optimal health and well-being, initiate and maintain those activities, and have great commitment to pursue anticipated outcomes. The more frequency and intensity of HPBs postpartum women practiced, the greater the level of perceived of health status occurred. Congruent with other study that health status was the most effective factors used to describe HPBs of married and unmarried mothers (Wilson, 1991). Similar results were found in another study that found perceived self-efficacy had a positive relationship with perceived health status, and the person with high level of self-efficacy may have greater tendencies to participate in the activities needed to improve their health conditions in Thai women with SLE. (Sriyuktasuth, 2002).

**Conclusion and recommendations**

The perceived health status, perceived self-efficacy, and HPBs of Bangladeshi postpartum women were at high levels, and they were positive associated among these variables. Thus working with postpartum women, the family, and the community is considered to be the critical link in ensuring continuum of care throughout pregnancy, childbirth and the postpartum periods. The empowering of women’s efforts aims at increasing resources like knowledge, cognitive capacities, health competencies, and the capacity for making healthy choices. In addition it increases access and utilization of quality
health services, particularly those provided by the health care professionals. The findings of this study could be beneficial for enhancing the health and well being of postpartum women. However further replicated studies are needed with large samples sizes in other settings, or with other groups of women with postpartum complications.

References


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