Stress, Coping Strategies, Quality of Life and Lived Experiences of Women with Pregnancy-induced Hypertension

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Abstract

Objectives: To explore and assess the levels of stress and its manifestation and different stressors in women with pregnancy-induced hypertension and to identifying the coping strategies used by women with PIH in response to stress.

Methods: The research approach for the first phase of study was correlational and the subjects were selected by convenience sampling technique and for the second phase qualitative using phenomenology to study the lived experiences. The study comprised of 65 women with PIH, in the Phase I and 6 women with PIH in the Phase II, who were admitted in antenatal wards of KLES Hospital and Medical Research Centre and District Hospital Belgaum. The data on coping strategies was collected using a standardized tool, the Jalowiec coping scale and data on quality of life of women with PIH was collected using another standardized tool – the World Health Organization Quality of Life scale (WHOQOL-BREF). The qualitative data was collected using a semistructured interview schedule and the audiotaping of the verbatim of lived experiences.

Results: In the Phase I it was found that majority (64.61%) of women had moderate stress levels. The finding indicated that there was no correlation between levels of stress and use and effectiveness of coping strategies. \( r_1 (65) = 0.1226, P > 0.05, r_2 (65) = 0.1805, P > 0.01 \). The association between levels of stress and quality of life of women with PIH showed that quality of life was independent of levels of stress. The chi-square value \( \chi^2 \) effect \( =12.137 \) between age and effectiveness of coping strategies was significant which showed that effectiveness of coping strategies were dependent on the age of the women with PIH. In the Phase II based on the analysis of data four themes emerged from the women’s perspective of the phenomenon under study.
Theme 1: Impact of bed rest.
Theme 2: Unaware of PIH and its effect on self and unborn child.
Theme 3: Fear of outcome of pregnancy.
Theme 4: Psychological impact of symptoms of PIH.

Conclusion: All these four dimensions depict the importance of holistic and comprehensive care.

Keywords: Pregnancy induced hypertension, stress, coping strategies, quality of life, lived experiences.

INTRODUCTION

Pregnancy induced hypertension is a complication of pregnancy that cannot be taken lightly. Maternal and fetal morbidity and mortality are higher than normal when pregnancy gets complicated with hypertension. PIH in its severe form is seen when the blood pressure levels noted are equal or more than 170 mmHg systolic and 110 mmHg diastolic. PIH is a global problem and complicates approximately 10-17% of pregnancies and is therefore most common problem requiring special attention in antenatal and intrapartum period. The incidence of pregnancy induced hypertension (PIH) in India ranges from 5-15%. The incidence of PIH in pre-emigravidae is 16%, and multigravidae 7%, primary pre-eclampsia occurs in 70% of PIH cases and secondary pre-eclampsia in 30% of all PIH cases. The incidence of PIH was found to be 14% in primigravida and 16% multigravida’s in selected hospital of Belgaum, Karnataka.

Stress is present in confinement and immobilization. Women experience profound changes in emotional, social and cognitive status. “Pregnancy induced hypertension is a high-risk” condition which implies a threat to pregnancy, either by means of the mother’s health or the health of the fetus. Coping and stress are inter-related. Coping is an attempt made by an individual to resolve stress. The phenomenon of interest in the present study is “lived experiences” of women with PIH.

Quality of life measures have become a vital and often required part of health outcomes appraisal. Measurement of
QOL provides a meaningful way to determine life impact of health care where cure is not possible. Stress, coping, and quality of life are important aspects when the effects of hypertension of pregnancy on women are examined. Coping reflects a process and includes active involvement over a period of time.

Thus, this study aims to identify stress, coping strategies, quality of life (QOL) and lived experiences of women with PIH. Stress, coping strategies and quality of life are measured using quantitative research approach whereas lived experiences is studied using phenomenology as a qualitative approach. The investigator has experience with quantitative research as faculty and research guide. But is interested as a novice to be exposed to qualitative research and believes that the blending of qualitative and quantitative data in a single project can be advantageous in developing evidence base for nursing practice, by using multimethod research. The researcher believes that it will be advantageous as the two methods have complementary strengths and weaknesses, an integrated approach can lead to theoretical and substantive insights into the multidimensional nature of reality.

METHODS

The data were collected from 30th April till 25th May 2006 after taking administrative permission. In the phase I data were collected using all four tools:

- Tool I A : Background information
- Tool I B : Srivastava’s socioeconomic status scale (Modified)
- Tool II : Stress and stress manifestation assessment scale
- Tool III : Jalowiec’s coping scale
- Tool IV : World Health Organization Quality of Life—WHOQOL scale.

Each subject was explained the purpose of the study and consent was obtained prior to interview. For qualitative data separate consent was taken. In phase II data was collected using Tool V, a semi-structured interview schedule and audio-taped verbatim. The investigator went through the records of cases of PIH admitted during the year, 2003, 2004 and also found out that the average number of admission of women with PIH ranged from an average of 44 cases per month, together in all the selected hospitals. Hence, the investigator had a convenient sample size of 65 women with PIH who would be available during the period of data collection in the first phase. Six women with PIH who scored as moderate to severely stressed in the stress rating scale were picked up by criterion sampling technique for qualitative analysis of “lived experiences” in the second phase.

RESULT

In the phase I according to the age group majority 45 (69.23%) were in the age group of 19-24 years, and 02 (3.07%) were above 30 years. Majority 34 (53.84%) had mild PIH, 14 (21.53%) had severe PIH and 17 (26.15) had gestational hypertension. Majority 42 (64.61%) of women with PIH had moderate stress levels, 23 (35.38%), had mild stress levels (Table 1). Mean of stress levels was 57.07, standard deviation 6.59 and mean percentage 63.41, in women with PIH. The mean percentage score were apparently higher in the area of psychological manifestations (43.81%) in comparison to the physical and social manifestations, i.e. 34.97% and 21.61 respectively. The mean percentage score was higher in the area of optimistic (13.72%) coping strategies as compared to other coping strategies. The standard deviation (± 0.56) computed between coping strategies shows that fatalistic coping scores were apparently more dispersed in comparison with other coping strategies (Table 2). The adjusted median was computed for effectiveness of Jalowiec coping strategies and it was found that all eight coping strategies were falling under the category of below 2. The adjusted mean ranged from 0.346 to 0.635 and median from 1.600 to 1.857. The adjusted standard deviation ranged from 1.538 to 1.883. The better mean (1.8) and median (0.635) was for supportant coping style. Raw scores were highest among domain IV (environmental domain) for all 65 women with PIH, i.e. 773.50, which means they showed high quality of life in this domain. They fared better in domain I physical where raw scores were 762.29 and domain III (Social relationship domain) where raw scores were 760.00. They fared least in psychological domain, domain II where they scored 758, and quality of life was least is this domain. There was moderate degree of significant positive correlation between physical-psychological, physical-social and physical-environmental domain (Table 3). There was no statistically significant association between level of stress and quality of life at 0.05 level of significance (Table 4). No statistically significant association was found between levels of stress and selected variables like age ($\chi^2 = 2.335$ at df 3) obstetric score ($\chi^2 = 0.182$ at df 1) type of family ($\chi^2 = 0.221$ at df 1) occupation of the women ($\chi^2 = 3.125$ at df 4) and type of PIH ($\chi^2 = 5.018$ at df 2) at 0.5 level of significance as P >0.5 for all variables. The chi-square value computed between age and effectiveness of coping strategies showed a statistically significant association. ($\chi^2_{\text{effect}} = 2.588$, $P > 0.5$). The use and effectiveness of coping strategies were independent of obstetric scores. ($\chi^2_{\text{use}} = 378$, $\chi^2_{\text{subeffect}} = 2.588$ at df 1), type of family ($\chi^2_{\text{use}} = 0.332$, $\chi^2_{\text{effect}} = 0.451$ at df 2), occupation of women ($\chi^2_{\text{use}} = 3.125$, $\chi^2_{\text{effect}} = 1.396$ at df 4) and type of PIH ($\chi^2_{\text{use}} = 0.7962$, $\chi^2_{\text{effect}} = 0.7962$)
at df 2), but dependent on age of the women with PIH. No statistically significant association was found between quality of life and selected variables like age ($\chi^2 = 2.187$ at df 3), obstetric score ($\chi^2 = 1.251$ at df 1), type of family ($\chi^2 = 4.771$ at df 2), occupation of women ($\chi^2 = 3.125$ at df 4) and type of PIH ($\chi^2 = 1.657$ at df 2) among women with PIH at 0.05 level of significance, as $P > 0.5$ for all variables. In the phase II, four women with PIH were between 19-24 years of age and two were between 25-29 years of age. Two were primigravida’s and four were multigravida’s, four belonged to nuclear family whereas two were from joint family.

**DISCUSSION**

The present study findings revealed that among the sixty five women with pregnancy induced hypertension, majority 69.23% belonged to the age group of 19-24 years, maximum of them, 50.76%, were multigravidas. Majority had mild PIH (53.84%). Majority, 50.67% of women, belonged to middle class, which contradicts the findings of a study where majority 53.33% of women with PIH belonged to lower class. Majority 64.61% of women had moderate stress levels. In a study conducted majority of women 51.6% primigravidas and 50% multigravidas had high stress levels, which contradicts the findings of the present study, where most of the women had mild stress levels. Similarly, in a study conducted majority, 75% of women had severe stress levels which again contradicts the findings of the present study.

The stress levels in the present study were found to be 57.07, standard deviation $\pm 6.59$ and mean percentage 63.41% in women with PIH. In contrast in the findings of a study, mean stress scores were 66.40, and standard deviation $\pm 8.13$. Mean percentage scores were apparently higher in the area of psychological manifestations (43.81%) in comparison to the physiological (34.97%) and social (21.61%) manifestation, in the present study whereas in contrast, in the study majority of women scored higher (86.22%) in social manifestations as compared to psychological (80.93%) manifestations and physiological manifestations, (78.33%). These findings contradict the findings of the present study. It was observed in the present study that most of the women used different coping styles. The mean percentage for optimistic was (13.72%), evasive (12.90%), supportant (12.90%), self-reliant (12.82%), confrontative (12.67%), palliative (12.00%), fatalistic (11.48) and emotive (11.48%). It was also found that most of the women used different coping styles and found it effective. The mean percentage scores for effectiveness of Jalowiec coping styles was 13.78%, for supportant, self-reliant (12.90%), confrontative (12.82%), evasive (12.75%), optimistic (12.75%), palliative

<table>
<thead>
<tr>
<th>$\chi^2$ value</th>
<th>df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.634</td>
<td>1</td>
<td>0.4266</td>
</tr>
</tbody>
</table>

**Table 1:** Frequency and percentage distribution of women with PIH according to level of stress

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Level of stress/scores</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mild (30-49)</td>
<td>23</td>
<td>35.38</td>
</tr>
<tr>
<td>2</td>
<td>Moderate (56-68)</td>
<td>42</td>
<td>64.61</td>
</tr>
</tbody>
</table>

**Table 2:** Subscale wise adjusted mean, standard deviation and mean percentage distribution of use of Jalowiec coping strategies among women with PIH

<table>
<thead>
<tr>
<th>Coping strategies</th>
<th>No. of items</th>
<th>Adjusted mean score</th>
<th>Standard deviation</th>
<th>Adjusted mean percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confrontative</td>
<td>10</td>
<td>1.70 ± 0.32</td>
<td>12.67</td>
<td></td>
</tr>
<tr>
<td>Evasive</td>
<td>13</td>
<td>1.73 ± 0.30</td>
<td>12.90</td>
<td></td>
</tr>
<tr>
<td>Optimistic</td>
<td>9</td>
<td>1.84 ± 0.35</td>
<td>13.72</td>
<td></td>
</tr>
<tr>
<td>Fatalistic</td>
<td>4</td>
<td>1.54 ± 0.56</td>
<td>11.48</td>
<td></td>
</tr>
<tr>
<td>Emotive</td>
<td>5</td>
<td>1.54 ± 0.40</td>
<td>11.48</td>
<td></td>
</tr>
<tr>
<td>Palliative</td>
<td>7</td>
<td>1.61 ± 0.42</td>
<td>12.00</td>
<td></td>
</tr>
<tr>
<td>Supportant</td>
<td>5</td>
<td>1.73 ± 0.36</td>
<td>12.90</td>
<td></td>
</tr>
<tr>
<td>Self reliant</td>
<td>7</td>
<td>1.72 ± 0.37</td>
<td>12.82</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3:** Distribution of raw and transformed scores according to four domains of quality of life in women with PIH

<table>
<thead>
<tr>
<th>Domain</th>
<th>Raw scores</th>
<th>Transformed scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$T_1$ - 4-20</td>
<td>$T_2$ - 0-100</td>
</tr>
<tr>
<td>Physical</td>
<td>762.29</td>
<td>441</td>
</tr>
<tr>
<td>Psychological</td>
<td>758.00</td>
<td>509</td>
</tr>
<tr>
<td>Social relationship</td>
<td>760.00</td>
<td>999</td>
</tr>
<tr>
<td>Environment</td>
<td>773.50</td>
<td>477</td>
</tr>
</tbody>
</table>

**Table 4:** Association between levels of stress and QOL of women with PIH

<table>
<thead>
<tr>
<th>Stress</th>
<th>No of women</th>
<th>$\geq$ Median (79)</th>
<th>$\leq$ Median (79)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>23</td>
<td>73</td>
<td>10</td>
</tr>
<tr>
<td>Moderate</td>
<td>42</td>
<td>18</td>
<td>24</td>
</tr>
</tbody>
</table>

\[\chi^2 (cal) = 0.634 \quad df = 1 \quad P = 0.4266\]
contrast, in a study on women who had undergone laparoscopic sterilization the mean percentage for use of coping in confrontative style was (16%), self-reliant (15.2%), emotive style (11.65%), optimistic (10.39%), evasive (9.68%), palliative (8.98%), supportant (6.66%) and for the fatalistic coping style used was (5.3%). It was found that in a study in contrast to present study the mean percentage scores for effectiveness of coping styles for confrontive was (15.5%), self-reliant (13.5%), optimistic (10.39%), evasive (9.68%), emotive (9.38%), supportant (8.98%), palliative (6.66%) and for the fatalistic coping style (5.18%).

A study supports the findings of the present study where subjects rated optimistic, supportive and confrontive coping style as most often used. The findings of present study are consistent with the study that where most of the women’s psychosocial adjustment to diabetes using Jalowiec’s coping scale, reported maximum use of confrontive, optimistic and supportant and self-reliant coping. In contrast in a study most commonly used coping styles in women who had undergone laparoscopic sterilization were confrontive, self-reliance and emotive coping style. In a study in identifying perceived stressors and coping strategies among subjects with rheumatoid arthritis subjects used optimistic and confrontative coping strategies more as compared to others. This study supports the findings of the present study where most commonly used coping styles were optimistic (13.72%) and confrontative (12.67%). The findings of the present study indicated that raw scores for quality of life were highest among environmental domain (773.50), for all 65 women with PIH indicating high QOL in this domain. The findings of present study are supported by the findings of a study where subjects with HIV infection fared best in the environmental domain and showed high QOL in the same. In the present study, it was found that coefficient of correlation between physical-psychological (r1 = 0.5631), physical-social (r2 = 0.5792) and physical-environmental (r3 = 0.5218) domains showed significant moderate positive correlation between the four domains. The findings of the present study are thus consistent with the findings by the study where in subjects with HIV infection, the magnitude of relationship between the domains was highly positive and significant. In the present study, the association between levels of stress and quality of life of women with PIH was not statistically significant. Thus, it can be interpreted that quality of life was independent of the levels of stress. In contrast a study done on women with breast cancer con tradicated the findings of present study. It was found that in a study done to assess quality of life, depression and stress in breast cancer women, the malignant group had poorer physical and psychological QOL and higher life stress, which indicates that poorer the quality of life, higher are the stress levels.

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2. I fondly remember and thank Dr Aparna Bhaduri, an eminent teacher and personality who lit up the interest in qualitative approach through her course of discussions in teaching research methodology.

REFERENCES


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6. **Tables:** The number of Tables should not exceed five. No Table should exceed the limit of one page. Each Table should be typed double spaced, on a separate sheet of paper, should carry a title and be serially numbered in Arabic numerals in the order of its first citation in the text. Each column should have a short heading with units of measure, if applicable, in parenthesis. Do not use vertical rules. Use horizontal rules only above and below column headings and at the bottom of the Table. Explanatory matter should only be given in footnotes using a, b, c, d,... as symbols sequentially. Matter given in a sentence or two in the text should not be repeated in the Table. Use graphs as alternative to Tables with many entries.

7. **Figures and photographs:** These should be serially numbered in Arabic numerals. Figures should be unmounted in black ink drawings of professional quality with clear lettering. They should have a legend. Matter given in a Table must not be repeated as a Figure. Photographs should be in colored glossy prints and if black and white there should be a sharp contrast between black and white areas. They should be 8 x 13 cm in size. If applicable a linear scale should be incorporated in the photography or magnification stated. The word “Top” should be written in the appropriate place at the back of the photograph. A legend should be supplied for each photograph typed double spaced in consecutive order on a separate sheet of paper. Costs of processing and printing of figures and photographs will have to be paid in advance by the author on acceptance of the paper.

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