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Research Article

Biopsychosocial Wellbeing of High-Risk Pregnant Women: A Descriptive Study

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A B S T R A C T

Introduction: According to a recent study in India, perinatal mortality and morbidity score is high and high-risk is one of the most leading cause. All the antenatal women should be assessed for the risk factors like maternal age, reproductive history, the previous still birth, neonatal deaths, congenital anomalies, grand multiparty, anaemia, previous preterm, preeclampsia, previous caesarean, Rh-isoimmunisation, ABO incompatibility, medical diseases like diabetes, renal diseases, pulmonary diseases, family history of diabetes, hypertension and congenital malformations.

Aim: The present study aimed to determine the biopsychosocial wellbeing and find out relation between biological, psychological and social wellbeing of high-risk pregnant women.

Material and Methods: This study utilized a survey approach with a descriptive study design and was conducted in selected private hospitals in Udupi district, Karnataka. A total of 303 women with high-risk pregnancy after 28 weeks of gestation, attending Obstetrics and Gynaecology OPDs and who were admitted in the antenatal wards, were selected by using non- probability purposive sampling technique. Descriptive (Frequency and percentage) and Inferential statistics (Spearman's ρ**)** was used to analyse the data**.**

Result: The prevalence of low biological wellbeing was found to be 161 (53.1%), low psychological wellbeing 148 (48.8%), high psychological wellbeing, low social wellbeing 172(56.76%) among 303 high-risk pregnant women more than 28 weeks of gestation. There was statistically significant relationship between biological and psychological wellbeing (Spearman ρ=0.56, p=< 0.000): biological and social wellbeing (Spearman's ρ=0.245, p=<0.000); social and psychological wellbeing (Spearman ρ=0.391, p=<0.000).

Conclusion: The present study concluded that majority of high-risk pregnant women had low bio-psychosocial wellbeing and had significant relation in between biological, psychological and social wellbeing which may help health care workers to contribute a need-based quality care and help to improve the outcome of pregnancy.

Keywords: High-Risk Pregnancy, Biological Wellbeing, Psychological Wellbeing, Social Wellbeing

Introduction

The World Health Organization report recently published that the major complication that occurs for nearly 75% of all maternal deaths are severe bleeding, infections, high blood pressure, complications for delivery and unsafe abortion.

Recent advances in modern Obstetrics and Neonatal care in India is still facing high perinatal mortality rate (33/1000 live births).[1]

A prospective study stated that a high-risk condition during pregnancy is one of the causative factors and had a significant risk for both maternal and foetal morbidity and mortality. Result revealed that, among 405 pregnant women, 96 (59%) were high-risk, 191 (46%) were low risk, 128 (31%) were having no risk.[2]

An analytical study stated that pregnancy bring about physiological changes that may lead to high-risk pregnancy. Among 1266 pregnant women, result revealed that 804 (63.5%) were having high-risk pregnancy and 462 (36.5%) were having low risk pregnancies. There were high-risk pregnancy chances more in nullipara (RR=0.646, 95% CI 0.59-0.70) than low risk group and also high-risk pregnancy chances more among ≤18 years or ≥35 years age group (OR=0.417, 95%CI: 0.319-0.545; p=0.000) than between 18-35 years age group.[3]

Materials and Methods

This was a hospital-based survey, a non-experimental descriptive study conducted at selected hospitals of Udupi district, Karnataka between 6th January to 6th February, 2016.

Total 303 high-risk pregnant women were selected by using non-probability purposive sampling technique, fulfilling inclusion criteria such as high-risk pregnant women who were: more than 28 weeks of gestation, both primigravida and multigravida, elderly primi (>30 years), short statured primi (Height of <145 cm); High-risk pregnant women with history of: threatened preterm, antepartum haemorrhage, Rh incompatibility, abruptio placenta, placenta previa, malpresentations, gestational diabetes mellitus, anaemia, multiple gestation, oligohydramnios, polyhydramnios, stillbirth, intrauterine death, repeated foetal loss, foetal malformation, previous caesarean section and instrumental delivery. Written inform consent was taken from the recruited subjects and assured about confidentiality and anonymity of their responses. Formal administrative permission and Ethical Committee permission was obtained from Institutional Ethical Committee. The socio-demographic data was elicited by using Demographic proforma and biophysical parameter related information was obtained from patient's files and Likert scale was used to assess biopsychosocial wellbeing of high-risk pregnant women. Biological wellbeing variables like body image, physical activity, sleep and rest, energy and fatigue, treatment: psychological wellbeing variables like self-Identification, self-confidence, self-esteem, decision making, ambivalence, ideal versus practical confusion, inadequate abilities, liberty/ independence, fear of failure, anxiety, risk taking, coping: Social wellbeing variables like family support, influence, neglecting behaviour, hope, religiosity, economical support were included in the tool. All the data were gathered by using self-administered questionnaires and recorded by the nurse investigator. Based on obtained scores the biopsychosocial wellbeing was categorized in low and high wellbeing. The descriptive statistics in terms of frequencies and percentages was used to describe the sample characteristics and the null hypothesis was tested by computing Spearman's rho to identify relation in between biological, psychological, social wellbeing of high-risk pregnant women. The statistical level of significance was calculated at $p<0.05$ level.

Result

Section 1: Description of sample characteristics

Table 1.Distribution of demographic characteristics in frequency and percentages

(n=303)

Demographic characteristics	f	%
Type of family		
Nuclear family	221	73
Joint family	67	22
Extended family	15	5
Religion		
Hindu	250	83
Muslim	25	8
Christian	28	9
Educational status		
Primary education	25	8
Secondary Education	69	23
Higher secondary education	122	40
Graduation	76	25
Post-graduation	11	4
Occupational status		
Professional	22	7
Homemaker	272	90
Business	5	2
Skilled	4	1
Income		
Rs. <10000	104	34
Rs. 10001-15000	102	33

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Rs. 15001-20000	77	26
Rs. >20000	20	7
Parity		
Primi	205	68
Multi	98	32
Area of residence		
Urban	116	38
Rural	162	54
Semi urban	25	8
Dietary habits		
Non vegetarian	264	87
Vegetarian	39	13
Modes of transport from home to hospital		
Own vehicle	36	11
Walking	44	15
Auto or bus	223	74
Sources of Health-related information		
Newspaper	7	2
Magazines, books	10	3
Pamphlets	4	1
Neighbours and friends	23	8
Television/ radio	64	21
Family	62	21
Health care personnel	133	44

Out of the 303 sampled, majority 221 (73%) of the pregnant women with high-risk conditions were from nuclear family, 250 (83%) belonged to the Hindu religion, 122 (40%) were having higher secondary education, 272 (90%) were homemakers and in most 104 (34%) of the high-risk pregnant women, income was <Rs. 10000/ months. Most of high-risk pregnant women 205 (68%) were primigravida, 162 (53%) were from rural area, 264 (87%) were non-vegetarian and 223 (74%) were using auto or bus to reach health centre/ hospital from home. Most of them 133 (44%) were getting health related information from health care personnel (Table 1).

Mean age was 28.65±4.23 years, mean period of gestation was 32.15 weeks ± 3.08 days, mean systolic blood pressure was 115.67±9.83 mm of Hg. and diastolic blood pressure was 76.23± 9.22 mm of Hg (Table 2).

The distribution of the types of high-risk conditions among high-risk pregnant women is shown in Figure1, which shows that most of the high-risk pregnant women 87 (26%) had previous history of abortion, 43 (13%) had GDM, 7 (2%) had short cervix, 7 (2%) had placenta previa, 4 (1%) had polyhydramnios and 4 (1%) had short stature.

Table 2.Biophysical parameters of high-risk pregnant women including mean and standard deviation

(n=303)

S. No.	Biophysical Parameter	Mean ± SD
1.	Age (in years)	28.65±4.23
2.	Period of gestation (in weeks)	32.155±3.08
3.	Weight (in kg)	60.49±10.68
4.	Height (in cm)	155.28±6.3
5.	Amniotic Fluid Index (cm)	13.46±2.86
6.	Haemoglobin (mg/dl)	11.45±1.35
7.	Blood pressure (mm of Hg)	
7a.	Systolic pressure	115.67±9.83
7b.	Diastolic pressure	76.23±9.22

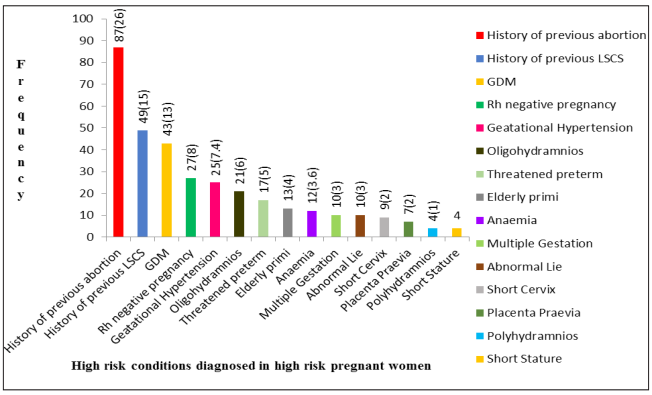

Figure 1.High-risk conditions diagnosed in high-risk pregnant women

Section 2: Description of biopsychosocial wellbeing of high-risk pregnant women

Table 3.Frequency and percentage of biopsychosocial wellbeing of women with high-risk conditions

(n=303)

Level of wellbeing	Range of score	f	%
Biological wellbeing			
Low wellbeing	15-62	161	53.1
High wellbeing	63-75	142	46.9
Psychological wellbeing			
Low wellbeing	20-79	148	48.8
High wellbeing	80-100	155	51.2
Social wellbeing			
Low wellbeing	15-71	172	56.76
High wellbeing	72-75	131	43.23

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Among the 303 pregnant women with high-risk condition, 161 (53.1%) had low biological wellbeing and 142 (46.9%) had high biological wellbeing; 148 (48.8%) had low psychological wellbeing and 155 (48.8%) had high psychological wellbeing; 172 (56.76%) had low social wellbeing and 131 (43.23%) had high social wellbeing (Table 3).

Section 3: Relationship between biological, psychological, social wellbeing

Table 4.Relationship among biological, psychological, social wellbeing

(n=303)

Variables	Spearman's ρ	p-value
Biological and psychological wellbeing	0.56	< .000
Biological and Social wellbeing	0.245	< .000
Social and Psychological wellbeing	0.391	< .000

There was a moderate relation between biological and psychological wellbeing which was statistically significant (ρ=0.56, p=<0.00). There was a low relation between biological and social wellbeing which was statistically significant (ρ=0.245, p=<0.00) and there was a low relation between social and psychological wellbeing which was statistically significant (ρ=0.391, p=<0.00) (Table 4).

Discussion

Description of the sample characteristics

The present study findings shows that majority of women with high-risk condition 221 (73%) were from nuclear family, 250 (83%) belonged to Hindu religion, 122 (40%) were having higher secondary education, 272 (90%) were homemakers, 104 (34%) income was Rs. <10000/month. Most of high-risk pregnant women 205 (68 %) were primigravida, 162 (53%) were from rural area, 264 (87%) were non-vegetarian and 223 (74%) were using auto or bus to reach health centre/ hospital from home. Most of them 133 (44%) were getting health related information from health care personnel (Table 1).

The finding of the present study is supported by a descriptive survey study done in North East Turkey to find out the psychological health status of pregnant women as compared to unplanned/ risk pregnancy, domestic violence, and some demographic variables such as educational status, marital status. Results revealed that antenatal women were screened in clinical setting at an average 34 weeks of gestational age with a range of 8-41 weeks of gestation, mean age 28.18±6.34 years (range 18-34 years). 34.3% (47) were primary school graduates, 76.6% (105) were unemployed and 70.1 (96) had nuclear family structure. The majority of 81% (111) pregnant women were living in town.[4]

The presents study findings reveals that the mean age was 28.65±4.23 years, mean period of gestation was 32.15 weeks ± 3.08 days, mean weight of high-risk pregnant women was 60.49±10.68 kg., mean height of high-risk pregnant women was 155.28±6.3cm, mean amniotic fluid index was 13.46±2.86 cm, and mean haemoglobin was 11.45±1.35 mg/ dl. Mean systolic blood pressure was 115.67±9.83 mm of Hg. and diastolic blood pressure was 76.23± 9.22 mm of Hg (Table 2).

The present study findings are supported by another cross-sectional study among 450 antenatal mothers to assess relationship between social support and perceived stress at health care centre and descriptive statistics revealed that the mean (SD) of participants' age was (35±1.1) years and gestational age was (26.5±3.86) weeks. 35% of the participants had elementary education, 92.8% of the pregnant women were housewife.[7]

The present study finding shows that among the 303 pregnant women with high-risk condition 161 (53.1%) had low biological wellbeing and 142 (46.9%) had high biological wellbeing; 148 (48.8%) had low psychological wellbeing and 155 (48.8%) had high psychological wellbeing; 172 (56.76%) had low social wellbeing and 131 (43.23%) had high social wellbeing (Table 3).

The present study findings are also supported by a cross sectional descriptive correlation design study to assess whether prenatal coping strategies mediated the effects of uncertainty and social support on the psychological wellbeing of high-risk pregnant women. And study results showed that there was negative correlation i.e. higher level of uncertainty reported less social support (r=-0.45, p<0.01) as well as less psychological wellbeing (r=-0.30, p<0.01).[8]

The present study finding shows moderate relationship between biological and psychological wellbeing which was statistically significant (ρ=0.56, p=<0.00). There was a low relation between biological and social wellbeing which was statistically significant (ρ=0.245, p=<0.00) and there was a low relation between social and psychological wellbeing which was statistically significant (ρ=0.391, p=<0.00) (Table 4).

The present study findings are also supported by a cross-sectional descriptive study done to identify GDM with symptoms of depression compare to than women without GDM. Out of 135 pregnant women with GDM 65 women had a history of depression (23%) compare to women without GDM (9%) with statistically significant difference ($\chi^2 = 5.40$, p= 0.02). the study concluded that women with GDM had more chances to have a history of depression than women

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without GDM (OR=3.79, 95% CI [1.07, 13.45], p=0.04).[6]

The present study findings are also supported by a cross-sectional study done among 1,447 pregnant women to find out relationship between the absence of physical activity and the occurrence of mental health in pregnant women in the Northeast of Brazil and result revealed that there was association between physical inactivity (p=0.039) and symptoms of severe depression .There was no association between physical inactivity and perceived stress (p=0.115). There was significant association between physical inactivity and mild (OR=1.44) or normal anxiety levels (OR=1.46; p=0.008). The study concluded there was no significant association between perceived stress, symptoms of depression and physical inactivity.[5]

Conclusion

As high-risk factors cause significant changes in biological, psychological, social wellbeing of high-risk pregnant women, health care personnel need to identify the impact of high-risk factors on the biological, psychological and social wellbeing and need to plan, implement and evaluate strategies to increase the wellbeing. The ultimate goal of nursing research is to bring out evidence which can help to bring abreact quality care to improve the life of high-risk pregnant women.

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Conflict of Interest: None

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