

Psychological Well-being and Perceived Stress among Antenatal Mothers

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ABSTRACT

Pregnancy is a beautiful period in a woman's life, but it also brings a fair amount of stress on her part. The study was conducted to fulfil the aim of assessing Psychological well-being and Perceived stress among antenatal mothers in selected communities in Sonitpur district of Assam. Non-experimental cross-sectional quantitative research approach was used in the present study to accomplish the objectives. Purposive sampling technique was used for selecting the sub-centers and all the antenatal mothers available during data collection period and fulfilling inclusion criteria were taken for the study. Data was collected from thirty-two (32) antenatal mothers who were residing in selected community areas of Sonitpur district of Assam. Written informed consent was taken from the participants who fulfilled the sample selection criteria. Clarifications were made regarding the main purpose of the study before the administration of tools. The study was undertaken with the permission of the FRC and Institute Ethics Committee of LGB Regional Institute of Mental health (LGBRIMH), Tezpur. A socio-demographic proforma, Psychological General Well-being Schedule (PGWB), and the Perceived Stress Scale (PSS) was used to collect the data. The collected data were analyzed using the software Statistical Package for the Social Sciences (SPSS) version 20. The findings showed that the majority of the antenatal mothers (78.1%) were of the Hinduism religion and 53.1% of them were living in a Joint family. The majority (81.3%) considered their Husband as their immediate support system. The majority (81.3%) of the respondents were in 13-28 weeks of their pregnancy. The majority of the participants (81.3%) were not having history of complications in the previous pregnancies. Most of the participants (53.1%) had a planned pregnancy. In the present study, no significant association was found between Psychological General Well-being and Perceived Stress with selected Socio-demographic variables. In the present study a negative correlation ($r = -0.454$ and $p < 0.01$) was found between Psychological General Well-being and Perceived Stress. Pregnancy always means a change for a woman. These changes may contribute to the stress among pregnant women. The study showed that higher perceived stress in pregnant women can cause lower psychological well-being. The promotion of well-being will therefore be enhancing maternal health, which in turn will have a positive effect on the baby.

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Pregnancy is a special and joyful period of life for a woman, which entitles her to motherhood bringing many changes in her life. During this time the pregnant woman embraces newer responsibilities that of the unborn child. Although pregnancy is considered as a natural state, at the same time it also brings along various challenges (Psychological, Biological, or Social) with it for the mother-to-be and her partner.

The World Health Organization (WHO) defines health as ‘a complete physical, mental, and social well-being, not merely the absence of disease or infirmity’ (Constitution: World Health Organization, n.d.). This WHO definition links health explicitly with Well-being, and conceptualize health as a human right requiring physical and social resources to achieve and maintain (Concepts of Health and Wellbeing, n.d.). Well-being can be understood as to how people feel and how they function, both on a personal and social level, and how they evaluate their lives as a whole (*Measuring Wellbeing: A guide for practitioners*, n.d.) This also takes into account the way people perceive their competencies or how well or how much they feel themselves being connected to the people around them. How people evaluate their life as a whole is captured in their satisfaction with their lives in comparison with the best possible life. Well-being is a much broader concept than moment-moment happiness; it includes happiness but also other things such as how satisfied people are with their lives as a whole, and also the sense of autonomy (having a sense of control over one’s life) and purpose (having a sense of purpose in life) (*Measuring Wellbeing: A guide for practitioners*, n.d.).

Perceived stress is the feelings or thoughts that an individual has about how much stress they are under at a given point in time or over a given time period (Phillips, 2013). It also takes into account the measurement to which a person feels his/her life is uncontrollable and the confidence in their ability in dealing with such problems or difficulties. Like any other stage of life, pregnancy also brings with it a considerable amount of stress for women; which may be because of changing roles, life changes, and relationship difficulties to list down a few. There are hormonal changes already occurring during pregnancy, which again may aggravate the stress levels. In a cross-sectional study conducted in India, it was found that, antenatal women (33.3%) had moderate to severe stress and stress was associated with gravidity, educational status and monthly family income (Pais et al, 2014). Stress during pregnancy affects the process of pregnancy, as well as its effect, may be seen in the baby’s development and maternal well-being after childbirth. The stress suffered due to various reasons by pregnant women affects the fetus in the womb as well as the bond between mother and child gets affected. Some researchers believe that severe stress during pregnancy harms mother infant relationship and reduce mother’s ability to play mother’s role (Muller-Nix, Forcada-Guex, Pierrehumbert, Jaunin, Borghini & Ansermet, 2004).

The relationship between Psychological Well-being and Perceived stress of antenatal mothers has not been explored adequately yet. This study, therefore, was aimed to assess Psychological well-being and Perceived stress among antenatal mothers in selected communities in Sonitpur district of Assam. The maintenance of Psychological Well-being is vital during pregnancy, as it is affecting not only during pregnancy but also in the post-partum period, both for the mother and the baby. The promotion of well-being and a decrease in perceived stress is important for enhancing maternal health, which in turn will have a positive effect on the baby.

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Objectives

- To assess the socio-demographic variables of the Antenatal mothers.
- To assess the Psychological well-being and Perceived stress among the Antenatal mothers.
- To analyze the association of selected socio-demographic variable with Well-being and Perceived stress in Antenatal mothers.
- To find out the correlation between Psychological well-being and Perceived stress in Antenatal mothers.

MATERIALS AND METHODS

Study design

In the present study, the research design was Cross-Sectional Descriptive in nature. The study was conducted in February and March month of 2020. The data were collected with the voluntary consent of the participants. A consent form and information sheet was prepared.

Sample

Antenatal mothers who were residing in selected community areas of Sonitpur district of Assam who were fulfilling the sample selection criteria were the sample for the study.

Sampling and Sample size

In the present study the Sub-centers were selected purposively. All the antenatal mothers under the selected Sub-centers who were available during the data collection period and fulfilling the sampling criteria were taken for the study. Thus, the sample size obtained was 32. The participants who were 18 years and above and could read, and understand the Assamese language were included in the study. The participants who were diagnosed with any mental disorder or taking treatment from mental health establishments were excluded. Respondents were also excluded if they were diagnosed with pregnancy-related problems or diagnosed with high-risk pregnancy.

Tools used

The participants were evaluated on the following tools:

- **Socio-demographic proforma:** A self-structured Socio-demographic profile was developed by the researcher for assessing the socio-demographic characteristics of the Antenatal mothers. Permission was taken from the authors for the use of the tools. The tools used were translated into the local language through forward and backward translations.
- **Psychological General Well-being Schedule (PGWB, 1984):** The scale is brief, reliable and self-report instrument, developed in 1970 for the National Centre for Health Statistics developed by Harold J. Dupuy. It has six subscales with 22 items i.e. Anxiety (5 items), Depressed mood (3 items), Positive Well-being (4 items), Self-control (3 items), General health (3 items) and Vitality (4 items) (The Psychological General Well-being Index, n.d.) The items can be answered on a Likert scale with six response categories classified according to the degree, intensity or frequency of items in the last week. The items in each dimension were added to get a total score in each dimension. Further, all the scores are added to obtain the composite score on Psychological well-being. The high score on the scale indicates high Psychological well-being. In the study the overall internal consistency as measured by Cronbach's alpha coefficient was 0.74

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- The Perceived Stress Scale:** The tool was developed in the year 1983 by Sheldon Cohen. The questions in this scale ask about one's feelings and thoughts during the last month. Reverse scoring is done for the questions 4, 5, 7 and 8. On these 4 questions the scores are changed like 0=4, 1=3, 2=2, 3=1, and 4=0. The total score of the tool is summation of all the items. The minimum and maximum score of this scale is 0 and 40 respectively with higher scores indicating higher perceived stress. The scores ranging from 0-13 would be considered Low stress, from 14-26 considered Moderate stress and from 27-40 considered High Perceived stress (Perceived Stress Scale, n.d.). In the present study the Cronbach's alpha value was found to be 0.70.

Ethical consideration

Permission for conducting the study was taken from the Institutional Ethics Committee (IEC) and Lokopriya Gopinath Bordoloi Regional Institute of Mental Health (LGBRIMH) FRC. Official permission was obtained from the Additional Chief Medical and Health Officer (FW) cum District Appropriate Authority, PC& PNDDT Act, Sonitpur, Assam, and the Joint Director of Health Services, Sonitpur. The nature of the study was explained to the participants and informed consent was taken before the study participation. Confidentiality and anonymity were maintained regarding participants of the study and liberty to leave the study at any point of time they desired.

Statistical analysis

The data collected were tabulated on the master sheet in MS Excel either in continuous or in categorical form and it was calculated by using Statistical Package for the Social Sciences (SPSS) version 20 according to the objectives of the study. Descriptive and inferential statistics were utilized to analyze the data.

RESULTS

Table-1: Mean and standard deviation of selected continuous Socio-demographic variables of the Antenatal mothers: n=32

Variable	Minimum	Maximum	Mean	Standard deviation
Age in years	18	37	25.78	5.91
Years of marriage	1	16	6.03	4.97
Monthly family income	3000	25000	10437.50	5136.45

Table-2: Frequency and percentage distribution of selected Socio-demographic variables of the Antenatal mothers n=32

Variables	Category	Frequency(f)	Percentage
Religion	Hinduism	25	78.1%
	Islam	07	21.9%
Type of family	Joint	17	53.1%
	Nuclear	15	46.9%
Immediate support system	Husband	26	81.3%
	Husband's family	5	15.6%
	Antenatal mother's family	1	3.1%
Diet	Vegetarian	1	3.1%
	Non-vegetarian	31	96.9%

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Variables	Category	Frequency(f)	Percentage
Education	Primary level	05	15.6%
	Middle level	13	40.6%
	High School level	06	18.8%
	Higher Secondary level	08	25%
Use of substance	Yes	03	9.4%
	No	29	90.6%
Body type	Lean and long	20	62.5%
	Fat and pear-shaped	01	3.1%
	Well-built and muscular	11	34.4%
Parity of pregnancy	Primigravida	13	40.6%
	Multigravida	19	59.4%
Weeks of pregnancy	Till 12 weeks	02	6.3%
	13-28 weeks	26	81.3%
	29-40 weeks	04	12.5%
Regularity of check-up	Present	31	96.9%
	Absent	01	3.1%
Planning of pregnancy	Planned	17	53.1%
	Unplanned	15	46.9%

In the present study, it was found that all the participants (100%) were married and all (100%) were hailing from rural areas. The majority of the participants (81.3%) were not having a history of complications in previous pregnancies such as miscarriage/abortion/stillbirth. Most of the participants (87.5%) were not employed and were home-maker.

Table-3: Mean and standard deviation of Psychological Well-being (PWB) and perceived stress of Antenatal mothers: n=32

Assessment	Minimum	Maximum	Mean	Standard deviation
Psychological Well-being	45	103	83.22	14.67
Perceived stress	12	28	17.59	4.26

Table-4: Frequency and percentage distribution of Perceived stress score of Antenatal mothers: n=32

Tool	Symptomatology	Frequency(f)	Percentage
Perceived stress score	Low stress	06	18.8%
	Moderate stress	24	75%
	High stress	02	6.3%

Table-5: Chi-square values showing association between selected socio-demographic variables with Psychological Well-being (PWB) of Antenatal mothers: n=32

Socio-demographic variables of Antenatal mothers		PWB Score		Chi-square (χ^2) values	df	p -value
		<83	≥83			
Religion	Hinduism	10	15	0.314	1	0.683
	Islam	02	05			
Type of family	Joint	05	12	1.012	1	0.467
	Nuclear	07	08			
Immediate	Husband	08	18	3.166	2	0.199

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Socio-demographic variables of Antenatal mothers		PWB Score		Chi-square (χ^2) values	df	p-value
		<83	≥83			
support system	Husband's family Antenatal mother's family	03 01	02 0	(Fisher's exact test)		
Diet	Vegetarian Non-vegetarian	01 11	0 20	2.016	1	0.375
Education	Primary level Middle level High School level Higher Secondary level	03 04 03 02	02 09 03 06	2.324 (Fisher's exact test)	3	0.563
Use of substance	Yes No	0 12	3 17	3.004	1	0.274
Body type	Lean and long Fat and pear-shaped Well-built and muscular	08 0 04	12 01 07	0.682 (Fisher's exact test)	2	1.000
Parity of pregnancy	Primigravida Multigravida	06 06	7 13	0.696	1	0.473
Weeks of pregnancy	Till 12 weeks 13-28 weeks 29-40 weeks	01 10 01	01 16 03	0.695	2	1.000
The complication in a previous pregnancy	Not applicable Miscarriage/Abortion/Stillbirth	08 04	18 02	2.605	1	0.122
Regularity of check-up	Present Absent	12 0	19 01	0.959	1	0.625
Employment status	Employed Unemployed	0 12	04 16	2.743	1	0.135
Planning of pregnancy	Planned Unplanned	06 06	11 09	0.075	1	0.536

*S-Significant at <0.05 level of significance

Data presented in **Table-5** shows that, there is no significant association between selected socio-demographic variables with Psychological Well-being (PWB) of antenatal mothers at a 0.05 level of significance

Table-6: Chi-square values showing the association between selected socio-demographic variables with Perceived stress of Antenatal mothers: n=32

Socio-demographic variables of Antenatal mothers		Perceived stress Score			Chi-square (χ^2) values	df	p-value
		Low	Mod erate	High			
Religion	Hinduism Islam	05 01	19 05	01 01	1.434 (Fisher's exact test)	2	0.571

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Socio-demographic variables of Antenatal mothers		Perceived stress Score			Chi-square (χ^2) values	df	p-value
		Low	Mod- erate	High			
Type of family	Joint Nuclear	03 03	13 11	01 01	0.376 (Fisher's exact test)	2	1.000
Immediate support system	Husband Husband's family Antenatal mother's family	05 01 0	20 03 01	01 01 0	4.046 (Fisher's exact test)	4	0.500
Diet	Vegetarian Non-vegetarian	0 06	01 23	0 02	1.697 (Fisher's exact test)	2	1.000
Education	Primary level Middle level High School level Higher Secondary level	01 03 0 02	03 09 06 06	01 01 0 0	4.444 (Fisher's exact test)	6	0.702
Use of substance	Yes No	01 05	02 22	0 02	1.252 (Fisher's exact test)	1	0.592
Body type	Lean and long Fat and pear-shaped Well-built and muscular	03 0 03	15 01 08	02 0 0	3.148 (Fisher's exact test)	4	0.761
Parity of pregnancy	Primigravida Multigravida	03 03	08 16	02 0	3.295 (Fisher's exact test)	2	0.150
Duration of pregnancy	Till 12weeks 13-28 weeks 29-40 weeks	01 04 01	01 20 03	0 02 0	3.106 (Fisher's exact test)	4	0.664
The complication in a previous pregnancy	Not applicable Miscarriage/Abortion/Stillbirth	06 0	18 06	02 0	1.704 (Fisher's exact test)	2	0.543
Regularity of check-up	Present Absent	05 01	24 0	02 0	4.470 (Fisher's exact test)	2	0.250
Employment status	Employed Unemployed	0 06	04 20	0 02	0.991 (Fisher's exact test)	2	0.662

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Socio-demographic variables of Antenatal mothers		Perceived stress Score			Chi-square (χ^2) values	df	p-value
		Low	Moderate	High			
Planning of pregnancy	Planned Unplanned	03 03	13 11	01 01	0.376 (Fisher's exact test)	2	1.000

Data presented in **Table-6** shows that there is no significant association between selected socio-demographic variables with perceived stress of antenatal mothers at a 0.05 level of significance.

Table-7: Spearman's correlation coefficient (r) values showing the correlation between Psychological General Well-being (PGWB) and Perceived stress of Antenatal mothers n=32

Variables	Spearman r value	p-value
Perceived stress	-0.454**	0.009
Psychological Well-being (PWB)		

** Significant at 0.01 level of significance

The data presented that there was a significant negative correlation between Psychological General Well-being (PGWB) and Perceived stress of antenatal mothers.

DISCUSSION

The mean of perceived stress was found to be 17.59 ± 4.26 which is higher in a study conducted in Iran (i.e., 11.5 ± 5.5) (Iranzad, Bani, Hasanpour, Mohammadalizadeh, & Mirghaforbandh, 2014). Another cross-sectional study conducted in a urban maternity centre in Northern Ireland among 263 healthy low risk pregnant women by administering a self-report questionnaire, it was found that mean prenatal distress score was 15.1 ± 7.4 (Parcells, 2010). The differences in prevalence among the various studies may be due to the result of the differences in the population studied, differences in geographical area, cultural practices as well as the difference in assessment tools used.

In the current study, 75% (n=24) of the participants were having moderate level of perceived stress. Solivan et al found 31.1% in his study with moderate stress and 28.8% severe stress in a sample of 258 pregnant women (Solivan, Xiong, Harville, & Buekens, 2015).

In the present study, no significant association was found between psychological well-being and perceived stress with selected socio-demographic variables. This may suggest that the future interventions planned may not need differentiation based on socio-demographic variables. The small sample size may be one of the reasons that no association was found. For this reason, larger sample size may give more enlightenment in this area.

In the present study, a significant negative correlation was found between perceived stress and psychological well-being ($r = -0.454$, $p = 0.009$). The results indicate that an increased perception of stress decreases psychological well-being. During pregnancy a number of changes occur in a pregnant woman, the changes in her emotions, social interactions and family tie and added responsibilities. These changes contribute to the stress in this period, which in turn cause a decline in her well-being.

Limitations and future directions

The research study would add-on to the evidence for the relationship between psychological well-being and perceived stress among antenatal mothers. However, the index study is limited by a small sample size, exclusion of high-risk pregnant women as well as those who are diagnosed with any mental disorder or are taking treatment from mental health establishments. For this reason, the study findings may not be generalized to the whole population. Further, planning a larger sample size study, comparing among the participants of three trimesters will offer more knowledge on this area.

CONCLUSION

Pregnancy always means a change for a woman and her family members as well. Future trials or interventions will be necessary so that the information from this study can be integrated for the promotion of the mother's mental health. The promotion of well-being will be enhancing maternal health, which in turn will have a positive effect on the baby. Future researches may also be taken up to find out the various socio-economic and cultural factors contributing to the stress of pregnant women and their influence on the outcomes of pregnancy as well as a later stage of development of the child which will of great help in the identification of at-risk to-be mothers and plan interventions accordingly as early as possible.

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Conflict of Interest

The author(s) declared no conflict of interest.

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