

STRESS, ANXIETY AND DEPRESSION IN WOMEN WITH PRIMIGRAVADA: A STUDY ON PAKISTANI WOMEN

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ABSTRACT

OBJECTIVES: To examine psychosocial predictors of perceived stress, anxiety and depression in women with first-time pregnancy.

METHODS: Sample included 80 women with first pregnancy within the age range of 19-31 years, taken from major hospitals of Lahore, Pakistan. Measures comprised of Perceived Stress Scale, Zung Self-Rating Depression Scale and Pregnancy Phase Anxiety Scale.

RESULTS: Mean age of the husbands was 29.04 ± 3.94 years, mean duration of marriage was 17.74 ± 14.06 years, and mean education duration was 12.99 ± 3.32 years for wives and 13.86 ± 2.26 years for husbands. Mean score of perceived stress, depression and anxiety was 28.91 ± 5.48 , 52.80 ± 8.60 and 130.43 ± 33.04 respectively. Age of the women and husband had significant positive relationship with perceived stress and depression ($p < 0.01$). Model I showed that anxiety emerged as significant predictor of stress ($R^2 = .45$, $F = 63.61$, $\Delta R^2 = .45$, $p < 0.01$). Similarly, second model of perceived stress showed that anxiety and depression emerged as the significant predictors of stress ($R^2 = .51$, $F = 39.25$, $\Delta R^2 = .07$, $p < 0.01$). The third model that marital duration of the women as another predictor of stress ($R^2 = .54$, $F = 29.22$, $\Delta R^2 = .03$, $p < 0.01$). The results showed a significant positive relationship between perceived stress, anxiety and depression. Age of the husband had significant positive relationship with perceived stress while it had no significant relationship with depression and anxiety of the women.

CONCLUSION: Stress, anxiety and depression during pregnancy are significantly correlated in first time pregnant women. Women from early age groups report greater anxiety, depression and stress during first time pregnancy. Depression has propensity to cause stress in first time pregnant women.

KEY WORDS: Perceived Stress (Non-MeSH); Anxiety (MeSH); Depression (MeSH); Pregnancy (MeSH); Primigravada (MeSH).

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Perceived stress has been known to affect first time pregnant woman in so many unknown ways as this comes in subtle waves form and may linger in a diffused state of anxiety and depression.² This has been illustrated that when a pregnant woman is stressed, several biological changes may also occur, including elevation of stress hormones and various other health related adverse outcomes in the body.² These stressors induced reactions are combined with biochemical changes of pregnancy phase and may elicit adverse outcomes. These changes also spill over to psychosocial life of pregnant female. Pregnant women may experience changed eating and sleeping patterns, mood reactions and agitated responses. Her relationships with others start spoiling. Sometimes, she may be found going through anxiety, stress and depression due to different perceptual mind sets of her family members, expectations from her spouse, insecurity ascribed to future plans and due to her personality types.² Majority of women are not aware sometimes that sudden changes in their mood and anxiety state can be harmful for their babies. The chances of miscarriage, physical discomforts in the first trimester, unattractiveness of the body in the second trimester, travelling, outside home job in the third trimester may emerge as conspicuous problems and anxieties in pregnant women sometimes.³ Report of stress during pregnancy also multiply as this phase involves transition of many social roles and positions and there may occur phenomenon growth, change, poignancy, constant convulsions, enrichment, and challenges. The very fact that one has to adopt the responsibility of being mother is

INTRODUCTION

Pregnancy is a phase that demands physical contribution and psychosocial role transition from a woman especially the ones, who conceive for the first time (primigravada). This phase is replete with amalgam of pleasure and blues. The physical facets of this phase have

been frequently studied but empirical investigation on psychosocial impact of first-time conception is scanty. Thus, the current research has been laid out to unveil psycho-social predictors of anxiety, stress and depression during first-time pregnancy. This has been reported that at least one in ten pregnant women suffer from spells of depression, anxiety or stress.¹

sometimes taxing. Some empirical evidences show that it is a time when people as couples confront their fears and expectations about becoming parents and the start determining their own parenting styles.³

During this time, some new about-to-be mothers are filled with a feeling of inadequacy, and insecurity about losing their newly conceived baby. Among the most common mental health problems worldwide, depression, anxiety, and related psychological stress disproportionately impact young and socially disadvantaged women.^{4,6}

A study illustrating perinatal depression and its implications for child's mental health revealed that children in post-natal phases stayed irritated, agitated, carried low birth weights and went through recurrent health problems when their mothers had gone through perceived stress, anxiety and depression.⁷ This implies the adverse repercussions and how impairing they may turn out to be in the long run for the health of the child. Another study⁸ on the effect of depression, anxiety and early life trauma on the cortisol awakening response during pregnancy and the consequential results demonstrated that there were marked biochemical changes in the babies in postpartum phases when their mothers had gone through bouts of stress, anxiety and depression. A research on Chinese pregnancy restrictions, health-related quality of life and perceived stress among pregnant women in Macao, China revealed that women who adhered to behavioral restrictions were more likely to have poor physical health related quality of life and reported greater stress.⁹

A study on anxiety and depression symptoms in women and men from early pregnancy to 3-months postpartum, equivalence differences and effects revealed that men showed less anxiety and depression symptoms than women. However, their psychological states followed the same pattern of symptoms over time. Some researches though establish inconsistent pattern that second-time parents showed more anxiety and depression symptoms than first-time

parents and a different pattern of symptoms over time: an increase in anxiety and depression symptoms from the 3rd trimester to childbirth was observed in first-time parents versus a decrease in mood states and anxiety during second-time parents.¹⁰ In Pakistan, few studies have been conducted on stress, anxiety and depression in pregnant women,¹¹⁻¹⁴ but local data in women with first-time pregnancy is lacking. This study was planned to study the psychosocial predictors of perceived stress, anxiety and depression in women with first-time pregnancy in our set up.

METHODS

This quantitative research was laid out through cross-sectional research design and the goal was to investigate the psychosocial predictors of stress, anxiety and depression during first time pregnancy. The research was executed in three major hospitals of Lahore, Pakistan and most of the women enrolled were taken from Gynae units of Bahria Town Hospital, Saffia-Rasheed Hospital and Noor Binte Zohra Trust Hospital during August, 2014 to January, 2015. Ethical approval was granted by respective hospital committees. Women between the age ranging 19-30 years were taken. It was probed stringently from them that they did not have any prior history of psychiatric diseases. Only married females, having first time pregnancy were included. Those with early cases of abortions were excluded. The measures for data collection included a demographic questionnaire including queries regarding age, number of family members, type of family set up, occupation, education of the participant as well as of the spouse, socioeconomic/income levels, The Perceived Stress Scale, The Zung Self-Rating Depression Scale and the anxiety scale.¹⁵⁻¹⁷ The permission from head of the institutes was sought from Gynecology Department of the above mentioned hospitals for data collection. Informed consent from all study participants was obtained in writing. Frequent visits were paid to collect the data in face-to-face manner. The questionnaires were scored and after the computational

phase and data development through EpiData Software, the data was confirmed and assumptions were checked before its further analyses in SPSS (Statistical Package of Social Sciences) version 23.00.

RESULTS

Demographic characteristics of the study participants are shown in Table I. Mean age of the husbands was 29.04 ± 3.94 years, mean duration of marriage was 17.74 ± 14.06 years, and participants mean education was 12.99 ± 3.32 years for wives and 13.86 ± 2.26 years for husbands.

Mean score of perceived stress, depression and anxiety was 28.91 ± 5.48 , 52.80 ± 8.60 and 130.43 ± 33.04 respectively. Table II highlighted that all scales carried intact reliability coefficients and were reliable enough in seeking out responses of the participants.

The Table III indicated there was significant positive relationship between perceived stress and depression of women with first-time pregnancy. Higher level of perceived stress among the women was linked with increased level of depression. Further results' review indicated that significant positive relationship between perceived stress and anxiety existed which meant that higher the level of perceived stress the higher the anxiety was experienced.

Findings from Table IV demonstrated that age of the women had significant positive relationship with perceived stress and depression but had no significant relationship with anxiety. The results also showed that age of the husband had significant positive relationship with perceived stress while it had no significant relationship with depression and anxiety of the women. Duration of marriage and education of the women had no significant relationship with depression anxiety and stress.

The findings from Table V showed that anxiety emerged as the significant predictor of stress. Model I showed that anxiety emerged as significant predictor of stress. The overall model explained 45 % variance with $F(63.61) = .11, p <$

.01 Similarly second model of perceived stress was also significant as the model explained 51 % variance with $F(39.25) = .08, p < .01$ whereas anxiety and depression emerged as the significant predictors of stress. The third model was also established as significant as the overall model explained 54 % variance with $F(29.22) = .06, p < .01$ and marital duration of the women was emerged as another predictor of stress. The variables excluded were age and education of the woman as they did not appear significant in the earlier analysis.

DISCUSSION

This study revealed that a significant positive relationship in stress, anxiety

and depression among women with first-time pregnancy existed. There had been some corroborating western empirical findings on this phenomenon such as some researchers have corroborated the findings of the current investigation that anxiety, depression and stress in pregnancy coexisted and its implications for mothers, children were menacing. These researches also revealed that anxiety in pregnancy is associated with shorter gestation and carried adverse implications for fetal neurodevelopment and child outcomes.¹⁸ Some other supportive research work amplifies that anxiety in first time pregnancy is especially associated with lower birth weight

infants with consequences for retarded infant development. These distinguishable risk factors and related pathways to distinct birth outcomes merited further investigation. A longitudinal study also showed that women in first time pregnancy had depressive symptoms and post-partum complications were multiplied in such cases. Stress and anxiety were found to have inconsistent courses during the perinatal period.¹⁹ Regardless of the predominant trends, some inconsistent findings have shown that maternal mental distress returned to the initial level after birth.²⁰ Moreover, past empirical findings substantiate that many factors influenced the development of depression and anxiety in pregnancy, and a positive correlation was found between stress, depression and anxiety. In alignment of current findings some researchers have shown that that antenatal psychosocial stress is common, and high levels were associated with maternal factors known to contribute to poor pregnancy outcomes.²¹ Another such finding divulged that pregnant women had significantly higher pregnancy-specific stress in the first and third trimester of pregnancy, whereas state anxiety increased in the third trimester compared with the first and second trimesters. These results cater significant support and are in alignment with the findings from the current research.²²

The results demonstrated that age of the husband and wife and marital duration in years significantly predicted stress. However, these factors did not predict the significant relationship and variance for depression and anxiety. On this dimension of findings, a previous empirical research supports the results as one of the investigations through cross sectional research showed that duration of marriage and age of the spouse increased the levels of stress and depression in expecting mothers and was significant determinant of later psychological distress in off-springs. Additionally, some neurophysiological findings also establish that increasing age correlates with increased anxiety or depression behaviors in humans and rodents. The results also showed that

TABLE I: DEMOGRAPHICS OF STUDY PARTICIPANTS (n=80)

Variables		Mean	SD
Demographics	Participant's Education in years	12.99	3.32
	Marital Duration in years	17.74	14.06
	Husband's Age in years	29.04	3.94
	Husband's Education in years (duration)	13.86	2.26
		Frequency	%age
Pregnancy Duration	First trimester	27	33.8
	Second trimester	26	32.5
	Third trimester	27	33.8
Marital Status	Married	80	100
	Separated	0	0
Occupation	Government	27	33.8
	Private	45	56.2
	Personal	8	10.0
Family setup	Joint	53	66.2
	Nuclear	27	33.8
Income	High	25	34
	Middle	40	55
	Low	16	11

TABLE II: DESCRIPTIVE STATISTICS OF SCALES MEASURING PERCEIVED STRESS, ANXIETY AND DEPRESSION

Variables	K	Mean	SD	Minimum - maximum score	α
Perceived Stress	10	28.91	5.48	18-42	.92
Depression	22	52.80	8.60	33-72	.78
Anxiety	45	130.43	33.04	54-188	.80

TABLE III: RELATIONSHIP BETWEEN PERCEIVED STRESS, DEPRESSION AND ANXIETY OF WOMEN WITH FIRST-TIME PREGNANCY (n=80)

	Variables	1	2	3
1	Perceived Stress	-	.59**	.67**
2	Depression	-	-	.60**
3	Anxiety	-	-	-
	Mean	28.91	52.80	130.43
	SD	5.48	8.60	33.04

**p < 0.01

TABLE IV: RELATIONSHIP IN PSYCHOSOCIAL ASPECTS (AGE OF THE WOMEN, DURATION OF MARRIAGE, AGE OF HUSBAND AND EDUCATION OF HUSBAND) WITH PERCEIVED STRESS, DEPRESSION AND ANXIETY (n=80)

Variables	Perceived Stress	Depression	Anxiety
Age of the Women	.33**	.26*	.21
Duration of Marriage	.20**	.08	-.01
Education of Women	.09	.12	.12
Age of Husband	.33**	.19	.15
Education of Husband	.02	.16	.11

*p<0.05; **p<0.01

TABLE V: STEPWISE REGRESSION FOR PREDICTORS OF PERCEIVED STRESS (ONLY VARIABLES WITH SIGNIFICANT RELATIONSHIP INCLUDED HERE) (n=80)

Variables	Perceived Stress			
	Model 1B	Model 2B	Model 3B	95% CI
Constant	14.40**	8.30**	7.57**	
Anxiety	.11*	.08*	.08	.05 .12
Depression		.18*	.19**	.05 .30
Marital duration			.06*	.01 .13
R ²	.45	.51	.54	
F	63.61**	39.25**	29.22**	
R ²	.45	.07	.03	

N=25, CI= confidence interval. *p<.05, **p<.01

the age of husband had significant positive relationship with perceived stress while it had insignificant relationship with depression and anxiety of the women. Findings from some other contradictory researches have reported that there was no effect of female age on pregnancy rate or time to pregnancy but husband's age did predict the vulnerability to stress and depression.²³ Results also indicated that education of the women had no significant relationship with depression anxiety and stress. Moreover, the duration of the marriage revealed significant relationship with perceived stress, depression and anxiety. The results also showed that education of the husband had no significant relationship with perceived stress, depression and anxiety of the women with first-time pregnancy.

In the light of above investigation, this is suggested that this would be useful in future to extend longitudinal perspective to delineate any possible trajectories of maternal and paternal moods during perinatal phase. The present study findings are preliminary one in Pakistan in highlighting the

psychosocial facets of first-time pregnancy among women. This study establishes awareness and understanding for extending greater concerns for the psychosocial and emotional health of the women during pregnancy just as people usually take care of physical health and neglect psychosocial dimensions. The inculcation of Clinical and Health Psychologists to improve the well-being of first-time pregnant women can improve their health and could ensure better psychological and emotional health. This could resultantly ensure wellbeing of the yet to be born child in postpartum life in addition to expecting mother. Preventive and efficacious interventions may be developed for parents, clinicians and perinatal staff.

CONCLUSION

The study findings showed a significant positive relationship between perceived stress, anxiety and depression in women with first-time pregnancy. The findings also revealed that women from younger age group experienced greater levels of anxiety, stress and depression. Anxiety

somehow did not trigger pregnancy based stress but depression experienced during first-time pregnancy among women emerged as significant predictor of reported stress during first time pregnancy.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

AM: Concept & study design, acquisition, analysis and interpretation of data, drafting the manuscript, final approval of the version to be published

RM & SM: Acquisition of data, drafting the manuscript, final approval of the version to be published

SN: Critical review, final approval of the version to be published

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

CONFLICT OF INTEREST

Authors declared no conflict of interest

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