ORIGINAL ARTICLE

INTERNALIZING PSYCHOLOGICAL PROBLEMS AS PREDICTOR OF MENTAL WELLBEING AND LIFE SATISFACTION AMONG PREGNANT WOMEN

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Background: Pregnant women are at an increase risk of developing depression, anxiety and stress which can lead to less life satisfaction and decrease mental wellbeing. The present study was intended to examine the impact of internalizing psychological problems, including depression, anxiety, stress, on mental well being and life satisfaction, and to investigate depression impact on stress and anxiety among pregnant women. **Method:** It was a cross-sectional survey conducted at University of Haripur from Nov 2015 to May 2016. Following purposive sampling, one hundred pregnant women with age range of 19 to 38 years without any limitation of gestational age were approached during pregnancy from Obs/Gyn OPD of District Headquarter Hospital, Yahya Welfare Complex, and Allama Iqbal Hospital, Haripur. Depression, Anxiety, Stress Scale, Warwick-Edinburgh Mental Wellbeing Scale and Life Satisfaction scale were used for data collection. Pearson correlation analysis was used to access relationship among study variables. Impact of internalizing psychological problems on mental wellbeing and life satisfaction were computed through linear regression analysis. **Results:** Depression, anxiety and stress were positively related to each other and negatively related to wellbeing and life satisfaction ($p<0.001$). Linear regression analysis depicted that internalizing psychological problems have significant impact on mental wellbeing and life satisfaction ($p<0.001$). Further, depression has a significant impact on stress and anxiety of pregnant women ($p<0.001$). **Conclusion:** Presence of stress, depression and anxiety significantly decreases mental wellbeing and life satisfaction during pregnancy. Increase in depression is highly responsible for rise in stress and anxiety among pregnant women.

Keywords: Depression, Anxiety, Stress, Mental wellbeing, Life satisfaction

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INTRODUCTION

The prevalence of mental health issues is on the rise around the globe. Internalizing and externalizing issues both are a part of mental health problems. Internalizing psychological problems such as depression, anxiety and stress are those which are not easily visible but rather irritate an individual internally with every passing day.[1] Depression, anxiety and stress are prevailing problems among pregnant women as pregnancy is a turning point in women's life. If not treated, internalizing psychological issues have a deep consequence on mental wellbeing and life satisfaction of pregnant women.[2]

Pregnant women's mental health is a public health asset due its consequence on both mother and child health. Healthy Babies National Coalition in 2002 characterized pregnancy as the period of offspring origination to birth. Pregnancy for the most part endures 40 weeks. Prior researches have focused on how internalizing psychological problems, i.e., anxiety, depression, and stress during pregnancy affect the foetus and postnatal psychological problems of mother.[3] Anxiety refers to a condition of frightfulness about what may occur later. On an average, 12–20% of pregnant women during pregnancy suffer from anxiety. Research shows that anxiety has life-long consequences on child psychological health.[4] Pregnancy increases the risk of depression. Depression is a feeling of despair and sorrow which negatively impacts the way an individual feels, thinks and behaves. It can provoke a variety of physical and energetic issues and can decrease an individual's ability to work.[5] According to Zainab *et al*[6], 30–66% of pregnant women in Pakistan suffer from depression and anxiety while in UK this approaches to 70%. Literature shows that 78% of pregnant ladies experience low to direct antenatal psychosocial thrust and 6% of them experience anomalous states.[7] Symptoms of anxiety may further bring certain psychological disorders such as phobias, panic disorders, and obsessive compulsive disorder. Stress is the alarm reaction in which body reacts to something that is unusual, dangerous, unknown and disturbing. Under stress, body make physiological changes too.[8] Constant environmental insult is an indication of depression, stress and anxiety among pregnant women.[9]

Mental wellbeing empowers mankind to recognize their potential.[10] The stage to realize the life worthwhile, significant, and of good standard characterizes as life satisfaction.[11] Pregnancy related hormonal changes are directly related with depression,

stress, and anxiety affecting mental wellbeing and life satisfaction of women. This can have a serious impact on new baby, other children, and their partner too.

During pregnancy, poverty, social and familial factors seems to influence maternal psychological health which in turn is connected to less wellbeing and low life satisfaction. In Pakistan, the strong desire from family members especially husband to have a baby boy can have a potential impact on pregnant women's mental health.

Limited studies are available on effect of internalizing psychological problems on mental well being and life satisfaction of pregnant women especially in Pakistan.[12–14] A broad assemblage of research uncovers the relationship, impacts, and expectations among these variables but with different type of samples. The current study aims to investigate the impact of internalizing psychological problems, i.e., depression, stress and anxiety on life satisfaction and mental wellbeing of pregnant women. It also aims to investigate impact of depression on anxiety and stress among pregnant women.

METHODOLOGY

This cross-sectional survey was conducted at Department of Psychology, University of Haripur from November 2015 to May 2016 after attaining acceptance from Institutional Ethics Committee. Sample of 100 pregnant women without any limitation of gestational age, ensuing purposive sampling were approached from Gynaecology OPD of District Headquarters Hospital, Yahya Welfare Complex, and Allama Iqbal Hospital, Haripur, Pakistan.

Data collection was done through following instruments: (a) Depression, Anxiety, Stress Scale (DASS-21) (b) Warwick-Edinburgh Mental Wellbeing Scale, and (c) Life Satisfaction scale. Four point likert response pattern for Depression, Anxiety and Stress Scale was produced by Lovibond and Lovibond[15] and translated by Aslam and Tariq (2010)[16]. It contains 21 items with 3 sub-scales, i.e., depression, anxiety, and stress. Each subscale has 7 items. The alpha dependability of DASS-21 scale for depression was 0.88, for anxiety it was 0.82, for stress α=0.90, and for the aggregate scale it was 0.93. Warwick-Edinburgh Mental Wellbeing Scale was used to measure the well being of pregnant women. It is a reliable scale with 14 items and has 0.83 test retest reliability.[17] Life Satisfaction Scale is an overall measure of life fulfillment.[18,19] It is a reliable and valid 5 point scale with Cronbach's alpha of 0.87.

Ethical approval of the project, and permission to use instruments was obtained before beginning of study. Data were collected from those who were willing to participate after informed consent. About 20–30 minutes were taken by each respondent to fill the scale. A total of 120 scales were distributed from which 100 were returned after completion and were checked by the researcher. SPSS-21 was used for data analysis and $p<0.001$ was considered as statistically significant. Cronbach's alpha reliability of the scales were computed for internal consistency. Pearson Correlation analyses were used to access relationship among study variables. Impact between internalizing psychological problems, mental wellbeing, and life satisfaction were computed through linear regression analysis.

RESULTS

Out of 100 pregnant women, 45 were from District Headquarters Hospital, 30 from Yahya Welfare Complex, and 25 from Allama Iqbal Hospital, Haripur, with age range of 19–38 years (28.5±5.91). The reliability analysis of the scales computed for depression, anxiety, stress, life satisfaction, and well being were α=0.73, α=0.71, α=0.75, α=0.81, and α=0.85 respectively which demonstrated satisfactory internal consistency.

Table-1 shows relationship among study variables. Depression had noteworthy positive relationship with anxiety (r=0.71) and stress respectively (r=0.90, $p<0.001$). On the other hand, depression had negative relationship with life satisfaction (r=-0.53) and wellbeing (r=-0.42, $p<0.001$). Anxiety had critical positive relationship with stress (r=0.70) and negatively correlated with life satisfaction (r=-0.72) and wellbeing (r=-0.67, $p<0.001$). Stress had critical negative correlation with life satisfaction (r=-0.57) and wellbeing (r=-0.42, $p<0.001$). Life satisfaction had significant positive connection with wellbeing (r=-0.84, $p<0.001$).

Table-2 shows linear regression analysis of predictor variable (depression, anxiety, stress) toward outcome variable, i.e., life satisfaction. R^2 value 0.28 (for depression) indicates 28% variance in the life satisfaction (dependent variable) can be accounted for by (Depression) with F (1, 98)=40.15, $p<0.001$. Depression has significant negative effect on life satisfaction (β =-0.60, $p<0.001$) among pregnant female. R^2 value 0.52 (for anxiety) indicates that 52% variance in the life satisfaction (dependent variable) can be accounted for by anxiety, i.e., (predictor variable) with F (1, 98)=109.25, $p<0.001$. Anxiety had significant negative effect on life satisfaction (β=-0.92, $p<0.001$) among pregnant females. For stress the R^2 value 0.24 indicates that 24% variance in the dependent variable can be accounted for by predictor with F (1, 98)=32.84, $p<0.001$. Stress had significant negative effect on life satisfaction (β=-0.59, $p<0.001$) among pregnant female.

Table-3 shows linear regression analysis with predictor variable, i.e., depression, anxiety and stress and outcome variable, i.e., mental wellbeing. The R^2 value 0.17 indicates that 17% variance in the mental

wellbeing can be accounted for depression F (1, 98)=21.43. Depression has significant negative effect on wellbeing (β=-0.57, p<0.001) among pregnant females. R^2 value 0.45 indicates that 45% variance in the well being (dependent variable) can be accounted for anxiety, i.e., (predictor variable) with F (1, 98)=82.23. Anxiety had significant negative effect on wellbeing (β=-1.05, p<0.001) among pregnant females.

R^2 value 0.17 indicates that 17% variance in the wellbeing, (dependent variable) can be accounted for stress, i.e., (predictor variable) with F (1, 98)=21.54. Stress has significant negatives effect on wellbeing (β = -0.61, p<0.001) among pregnant females.

Table-4 shows linear regression analysis with predictor variable (depression) and outcome variable (anxiety). The R^2 value 0.51 indicates that 51% variance in the anxiety (dependent variable) can be accounted for by (depression, i.e., predictor variable) with F (1, 98)=103.23, p<0.001. Results indicates that depression has significant positive effect on anxiety (β=0.63, p<0.001) among pregnant females.

Table-5 shows linear regression analysis with predictor variable (depression) and outcome variable (stress). The R^2 value 0.81 indicates that 81% variance in the dependent variable (stress) can be accounted for depression (predictor variable) with F (1, 98)=423.26. Depression has significant positive effect on stress (β=0.86, p<0.001) among pregnant females.

Table-1: Pearson correlation of study variables

Variables	Anxiety	Stress	Life Satisfaction	Wellbeing
Depression	0.71***	0.90***	-0.53***	-0.42***
Anxiety	-	0.70***	-0.72***	-0.67***
Stress		-	-0.50***	-0.42***
Life satisfaction			-	0.84***
Well being				-

***p<0.001

Table-2: Linear regression analysis among depression, anxiety and stress and life satisfaction of pregnant women

Predictors	B		Outcome: Life Satisfaction 95% CI LL	UL
Constant	20.75***		18.83	22.66
Depression	-0.60***		-0.80	-0.41
R^2		0.28		
F		40.15***		
Constant	23.64***		21.92	25.37
Anxiety	-0.92***		-1.10	-0.75
R^2		0.52		
F		109.25***		
Constant	20.18***		18.26	22.09
Stress	-0.59***		-0.79	-0.38
R^2		0.24		
F		32.84***		

***p<0.001
CI=Confidence Interval, LL=Lower Limit, UL=Upper Limit

Table-3: Effect of depression, anxiety, and stress on wellbeing among pregnant women

Predictors	B		Outcome: Mental Wellbeing 95% *CI* LL	UL
Constant	26.69***		24.17	29.20
Depression	-0.57***		-0.83	-0.34
R^2		0.17		
F		21.43***		
Constant	31.00***		28.73	33.27
Anxiety	-1.05***		-1.29	-0.83
R^2		0.45		
F		82.23***		
Constant	26.53***		24.08	28.98
Stress	-0.61***		-0.87	-0.35
R^2		0.17		
F		21.54***		

***p<0.001
CI=Confidence Interval, LL=Lower Limit, UL=Upper Limit

Table-4: Effect of depression on anxiety among pregnant women

Predictors	B		Outcome: Anxiety 95% *CI* LL	UL
(Constant)	3.34***		2.10	4.58
Depression	0.63***		0.51	0.76
R^2		0.51		
F		103.23***		

***p<0.001
CI=Confidence Interval; LL=Lower Limit; UL=Upper Limit

Table-5: Effect of depression on stress among pregnant women

Predictors	B		Outcome: Stress 95% *CI* LL	UL
(Constant)	0.60***		-0.23	1.44
Depression	0.86***		0.78	0.95
R^2		0.81		
F		423.26***		

***p<0.001
CI=Confidence Interval, LL=Lower Limit, UL=Upper Limit

DISCUSSION

Pregnancy is commonly viewed as a stage of actualization and happiness; however, for numerous females it can be a demanding phenomenon. It is considered to be a critical interval for both the mother and offspring. During this phase, there is an excess of emotional and bodily related changes in an expectant mother. Therefore, it is anticipated that anxiety, depression, and stress as internalizing psychological issues during pregnancy have antagonistic results for expectant and foetal growth.[20]

Earlier researches in Pakistan mostly have focused on the prevalence rate of depression, anxiety, stress in pregnant women.[12,13] Only a few of them have highlighted psychological and societal stressors in pregnant women.[14] Predominantly many studies focused on the psychological problems of married women[6] and

not on maternal mental health while most of them are comparative in nature.

The present study revealed significant negative relationship between depression, anxiety, stress and life satisfaction among pregnant women ($p<0.001$), similar to previous reports.[13,21] Our study also showed significant negative relationship between depression, anxiety, stress and expectant mental wellbeing ($p<0.001$). Throughout pregnancy, depression, anxiety, stress is more recurrent negatively influencing maternal mental wellbeing.[22]

Present study disclosed that depression, anxiety, stress are the significant negative predictors of life satisfaction and mental wellbeing of pregnant women ($p<0.001$). Consistent with the previous literature, most of the women during pregnancy appear to be less satisfied with life and have declined mental health.[23–25] In Pakistan, pregnant women are subjected to unpleasant environmental circumstances. There is a substantial gap in the living standards. Limited facilities, partner and familial conflicts, gender bias, unplanned pregnancies, adolescent pregnancy, desire from the family members to have more and more children, somatic and hormonal changes all are contributing factors leading to emotional problems.[21]

Prevalence of depression, anxiety, and stress seems to be high in pregnant women.[13] Psychological issues are interlinked. Study results highlighted a significant positive relationship between depression and anxiety along with depression and stress separately among pregnant women. In the general population, depression and anxiety are highly co-morbid, with almost 60% of individuals with major depression also meeting criteria for an anxiety disorder. Thus, with the increase in maternal depression, there is chance of increase in anxiety.[26] Maternal depression and stress during pregnancy has been associated with higher incidence of preterm birth because it affects mother's wellbeing leading to low birth weight of foetus and increased risk of miscarriage and postpartum depression.[27]

There is usually a small awareness of psychological problems in Pakistan. Mental, emotional, or inner health is not on the primacy of many families. Pregnant women are in dire need to get psychological aid, though, emotional or mood problems are viewed to be associated to poorer cohesion to treatment throughout pregnancy. Our study provides valuable insight regarding the understanding of psychological issues in pregnant women.

Gestational age of pregnancy has not been acknowledged in this study, so future researches might acknowledge pregnancy gestational age. In order to find out causes behind internalizing psychological problems during and after pregnancy both qualitative and quantitative research methods may be designed. In order to reduce such issues, use of counselling and psychotherapy along with medications will be beneficial for the sufferers.

CONCLUSION

Presence of stress, depression and anxiety as internalizing psychological problems significantly decreases the mental wellbeing and life satisfaction of pregnant women. Increase in depression is highly responsible for rise in stress and anxiety among pregnant women.

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