Coping strategies in women with anxiety and depression during prenatal period

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Abstract

Objective: To determine the frequency and association of coping strategies with different levels of anxiety and depression.

Methods: A cross-sectional study was carried out in private hospitals of Karachi, from January to May 2017. Data was collected from pregnant women willing to participate in the study by using non-probability convenient sampling. A questionnaire was used to gather socio-demographic and obstetric data after informed consent from pregnant women. Hospital anxiety and depression scale (HADS) was used to identify different levels of anxiety and depression. Coping strategies were assessed by using brief inventory results which were assessed on SPSS 16.

Results: Study group included 400 women between the ages of 18 to 38 years with a mean age of 27.08 ± 4.074. The adaptive strategies were used by 23.3% of the study group. Maladaptive strategies were adopted by 17.9% of women and 58.9% were using both adaptive and maladaptive strategies. There was a significant association of adaptive strategies and women appearing normal on HADS scale (p-value= 0.000, OR= .077) whereas there was negative association with maladaptive strategies and normal behaviour (p-value= 0.032, OR= 1.747). Women with borderline anxiety were using only combination of both types of strategies. Women using maladaptive strategies were having significant association with abnormal level of anxiety (p-value= 0.000, OR= 3.369) with borderline depression (p-value= 0.012, OR= .420) and abnormal depression (p-value= 0.000, OR= -6.657). Active coping (OR 5.952 and 6.679), instrumental (OR 4.138 and 6.679), planning (OR 10.300 and 6.646),) and positive reframing (OR 1.735 and 3.765) were protective for abnormal anxiety and abnormal depression. Religious practices were protective for abnormal anxiety only (OR= 4.289).

Conclusion: Adaptive strategies are associated with normal mental status and are protective for anxiety and depression whereas maladaptive strategies are the risk factors for anxiety and depression. Pregnant women should be encouraged to adopt adaptive strategies to reduce the adverse outcome associated with anxiety and depression.

Keywords: Prenatal education, coping behaviour, anxiety, depression, prenatal care.

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Introduction

Prevalence of anxiety and depression in pregnant women are high due to a range of socio-demographic, psychological and medical problems.[1-4] The prevalence of antenatal depression is variously reported in current literature as from 4.8% up to 40%[1,2]. The antenatal anxiety although comparatively less studied issue its prevalence was found to bebetween 6.8 to 59.5%[1]. Studies from Pakistan showed the same trend of high prevalence[3,4].

The anxiety and depression during pregnancy are negatively associated with maternal foetal and child outcomes[5]. These can lead to preterm delivery and low birth weight in addition to long term

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behavioural and emotional problem in child. Furthermore, antenatal depression increases the chances of postnatal depression affecting the bonding between the mother and baby.

Women are using a variety of strategies to deal with anxiety and depression. Coping is defined by Lazarus and Folkman[6] as the behavioural and cognitive efforts that allow an individual to overcome stressful situations and their negative consequences.

Some of the strategies used to deal with stress and anxiety are adaptive or positive while others are negative or maladaptive. Coping strategies which women are using are the key mediators between health and stressful situation[7]. Social and demographic factors such asage, socioeconomic status and bad obstetric history influence on pregnant women utilisation of coping strategies and their impact on health during high risk pregnancies[8].

Pregnancy is itself a stressful condition limited number of studies are done about coping strategies in low risk pregnancies[5]. Prevention of anxiety and depression during pregnancy is important due to its adverse sequel. As mental health of a pregnant woman is not only affecting the woman herself but her future generation hence, whole community and nation should take serious stepsto support and guide women in the most sensitive and vulnerable phase of her life.

In this regard researches should be done to understand the relationship between psychological issues during pregnancy and the coping strategies adopted by pregnant women to deal with the issues[9]. In this way, pregnant women can be guided to adopt positive or adaptive coping strategies rather than maladaptive to have better psychological adjustment.

There is a shortage of studies regarding coping strategies in pregnancy which has a specific role in maintaining normal mental health during pregnancy and local study was lacking in pregnant women with these problems. We therefore, conducted the study to determine frequency and the association of coping strategies used with normal borderline and abnormal levels of anxiety and depression.

Patients and Methods

A cross sectional study was conducted in Mamji Hospital and Saifi Hospital Karachi from January 2017 to May 2017. These are private tertiary care hospitals with Intensive Care Unit (ICU), Neonatal Intensive Care Unit (NICU) facilities and the availability of 24 hours multidisciplinary support. Each pregnant woman is seen and registered in antenatal clinic by consultant gynaecologist. Counselling is done regarding diet, exercise, breast feeding contraception and oral supplement (if needed) and timing and mode of delivery. Screening for anxiety and depression is not a routine in these hospitals.

Study was approved by ethical review board of Mamji hospital and permission obtained from Saifee hospital. Sample size was calculated to be 99[10,11]. We recruited 400 pregnant women to have more conclusive and precise result.

Pregnant women were interviewed after taking informed consent in two private hospitals of Karachi. Trained Medical officer collect the data in face to face interview. Sampling technique was convenient sampling and the inclusion criteria was all pregnant women who were willing to participate in the study and pregnant women without any medical disorder. Exclusion criteria were women who refused to participate and women with any medical disorder.

A predesigned questionnaire was used to gather socio-demographic and obstetric variables. These variables were age, socioeconomic status, education, employment status, ethnicity and parity.

A hospital based anxiety and depression scale[12] was used to screen anxiety and depression (HAAD).This questionnaire of anxiety and depression scale has sensitivity and specificity of 93% and 90% respectively for antenatal anxiety and 90% and 91% respectively for antenatal depression.

HAAD (for anxiety) questionnaire had a seven-item subscale with four-point scale for each item. The total score was from 0 to 21. Similarly, HAAD screened the depression on the same subscale and scoring. For analysis purposes, levels of anxiety and depression were judged on HAAD scale with normal as 0-7 scores. Borderline levels were within 8-10 scores and abnormal levels within 10-21 score.

Brief Cope Inventory[13] was used to determine the coping strategies of the participant in the past one month to deal with their anxiety and depression or any form of stress. Carver et al[13] at the University of Miami developed this Brief Cope Inventory which is now a commonly used tool cited in many articles. The Inventory assesses 14 coping styles with 28 questions.

Some of these coping strategies are positive or adaptive while others are negative or maladaptive. The adaptive strategies include active coping, instrumental support, planning, acceptance, emotional support, humour, positive reframing and religion. Maladaptive coping strategies are behavioural disengagement, denial, self-distraction, self-blame, substance abuse and venting.

Data was entered in SPSS 16 and the mean and standard deviation were calculated for continuous variables whereas percentages are used for categorical variable. Binary and multinomial regression was used to analyse association of coping strategies and socio-demographic factors with different levels of anxiety and depression.

Results

The study group included 400 women between the ages of 18 to 38 years with a mean age of 27.08 ± 4.074. Table 1 shows 39% women were having tertiary education. Women with primary and secondary education were 30.2% and 30.7% respectively. The study group comprises of 85.3% house wives and 14.7% working women. Regarding cultural background 55.8% were Urdu speaking 29.7% were Balochi, 15% were Sindhi and 12 % were of other different cultural origin.

The adaptive strategies were used by 23.3% of the study group. Maladaptive strategies were adopted by 17.9% of women and 58.9% were using both adaptive and maladaptive strategies. About, 59.2% women were normal on HAAD scale, 6.9 % have borderline anxiety, and 17.4% have abnormal level of anxiety. Women having borderline depression were 21.6% whereas 13% were having abnormal level of depression.

Table 2 shows primary education was significantly associated with maladaptive coping strategies (p value= 0.002, OR= .326). Eighty percent of working women were using both adaptive and maladaptive strategies.

There was significant association of adaptive strategies and women appearing normal on HADD scale (p-value= 0.000, OR= 22.89). Women with borderline anxiety were not using either adaptive or maladaptive strategies alone as all were using combination of both types of strategies. Women using maladaptive strategies were having significant association with abnormal level of anxiety (p-value= 0.000, OR= 3.369) with borderline depression (p-value= 0.012, OR= .420) and abnormal depression (p-value= 0.000, OR= -6.657).

Active coping (p-value=0.000, OR= 0.077) was significantly associated binary regression with normal behaviour on HAAD scale where as it was protective against borderline anxiety (p-value=0.000, OR=1.871) abnormal anxiety (p-value=0.000, OR=5.592), borderline depression (p-value= 0.035, OR= 1.675) and abnormal depression (p-value= 0.000,OR= 6.679).

Instrumental coping had significant association with normal level of anxiety (p-value= 0.000, OR=0.156) and was protective for abnormal anxiety (p-value= 0.000, OR= 4.138), borderline depression (p-value= 0.044, OR= 1.749) and abnormal depression (p-value= 0.000. OR= 6.679).

Planning strategies showed significant association with normal (p-value= 0.000, OR= 0.154) and was protective against abnormal anxiety (p-value= 0.000, OR= 10.300), borderline depression (p-value=

0.000, OR=3.643)and abnormal depression (p-value= 0.000. OR=8.646).

Acceptance coping was negatively associated with normal (p-value=.000, OR=5.350), borderline anxiety (p-value= 0.000, OR= 3.472) and abnormal anxiety (p-value= 0.000, OR= 2.777). Borderline depression had no significant association with this type of strategy. It had significant association with abnormal levels of depression only (p-value= 0.000,OR= 0.173).

Emotional strategies had significant association with normal significantly protective for abnormal anxiety and borderline depression. It showed no association with borderline anxiety and abnormal depression. Humour strategy had no significant association with normal and was protective against abnormal level of anxiety (p-value= 0.000, OR= 5.212).

Positive reframing was significantly associated with normal (p-value= 0.000, OR= 0.170) and protective for abnormal anxiety (p-value= 0.035, OR= 1.735), borderlined depression (p-value= 0.000, OR= 4.745) and abnormal depression (p-value= 0.000, OR=3.765). There was no association with borderline anxiety.

Religion was protective against abnormal anxiety (p-value= 0.000, OR= 4.289) and had no association with normal, borderline anxiety, borderline and abnormal depression.

Behavioural disengagement was a significant risk factor for borderline anxiety (p-value= 0.000, OD= 0.118) abnormal anxiety (p-value= 0.000, OR= 0.280), borderline depression (p-value= 0.000,OR= 0.402) and abnormal depression (p-value= 0.000, OR= 0.046).

Denial was a risk factor for borderline anxiety (p-value= 0.000, OR= 0.176) and borderlined depression (p-value= 0.000, OR= 0.243). It was not significantly associated with abnormal anxiety and depression. Its presence goes against the normal level of behaviour (p-value= 0.000, OR= 4.841).

Self-distraction was significantly associated with borderline anxiety (p-value=.019, OR= .350) and protective for normal levels of anxiety (p-value= 0.000, OR= 5.115) and borderline depression (p-value= 0.000, OR= 0.271). No significant association was shown for abnormal anxiety and abnormal depression.

Self-abuse showed significant association with borderline anxiety (p-value= 0.000, OR= 0.118) and abnormal anxiety (p-value= 0.000, OR=0.280) and borderline depression (p-value= 0.000, OR= 0.259) and abnormal depression (p-value= 0.000, OR= .040) and protective for normal level of anxiety and depression (p-value= 0.000, OR= 15.480).

Substance abuse was a significant risk factor for borderline anxiety (p-value= 0.000, OR= 0.107). No association was found with abnormal anxiety and borderline and abnormal depression. It was protective for normal level of anxiety and depression (p-value= 0.030, OR= 2.840).

Venting coping strategy had significant association with abnormal anxiety (p-value= 0.001, OR= 0.339), borderline depression (p-value= 0.000, OR= 0.100) and abnormal depression (p-value= 0.000, OR= 0.145). It showed no significant association with borderline anxiety and was protective for normal levels of anxiety and depression (p-value= 0.000, OR= 20.455).

Discussion

The mean age of this study group was 27.08 ± 4.074 (range 18 to 38 years). All belonged to the middle-class group. Majority of women were highly educated and housewife by profession. Major cultural group was Urdu speaking.

This study showed high frequency of borderline and abnormal level of anxiety and borderline and abnormal level of depression in pregnant women. This is in accordance with studies conducted in Karachi[14] and other area of Pakistan[3,4]. The same trend was observed in studies of other countries aswell[1,2]. The adaptive strategies alone were used by only 23.3% of the study group. There was a significant association of adapting coping strategies

Table 1. Socio-demographic and psychological characteristics of study group

Socio-demographic Factors	No.	Percentage characteristic	Adaptive coping strategies	p-value	Maladaptive coping strategies	p-value	Both adaptive+maladaptive
Education							
Primary	123	30.2	17.1	0.135 SD -.135	10.6	0.002 SD -.326	72.4
Secondary	125	30.7	32.8	0.059 SD -1.716	16,8	0.350 SD -.744	50.4
Tertiary	159	39.1	20.8		24.5		54.7
Employment status							
Working	60	14.7	0		20	0.490 SD -.783	80
House wife	347	85.3	27.4		17.6		55
Ethnicity							
Urdu speaking	227	55.8	26.4	0.000 SD -1.109E8	29.5	0.995 SD -1.2053	44.1
Sindhi	61	15	11.5	0.000 SD -2.695	9.8	0.995 SD -2.248E7	78.7
Pashto	42	10	0	1.000	0	1.000	100
Punjabi	49	12	42.9	0.319	0	1.000	57.1
Balochi	7	29.7	100	0.998	0	0.998	0
Others	21	5.2	0		0		8.8
Parity							
Primigravida	121	29.7	22.3	0.943 SD -1.019	22.3	0.146 SD -1.507	55.4
Multigravida	286	70.3	23.8		16.1		60.1
Level of anxiety and depression							
Normal	241	59.2	36.5	0.000 SD -22.891	14.5	0.831 SD - .994	49
Borderline Anxiety	28	6.9	0	0.998 OD -1.024E-9	0	OD-1.024 E-9	100
Abnormal anxiety	71	17.4	19.7	0.747 OD -1.118	35.2	0.000 OD - 3.369	45
Borderline depression	88	21.6	0	OD-1.11 E-10	13.6	0.012 OD -.42O	86.4
Abnormal depression	53	13	13.2	0.762 SD -.871	49.1	0.000 SD -6.657	37.7
Coping strategies							
Adaptive	95	23.3					
Maladaptive	73	17.9					
Both	239	58.7					

Table 2. Coping strategies in relation to level of anxiety and depression

Strategies Adaptive	Normal (%) p-value & OR	Anxiety borderline (%) p-value & OR	Anxiety abnormal (%) p-value & OR	Depression borderline (%) p-value & OR	Depression abnormal (%) p-value & OR
Active coping	(79.7) 0.000 0.182	(50) 0.000 1.871	(29.6) 0.000 5.952	(54.5) 0.035 1.675	(26.4) 0.000 6.679
InstrumentalSupport	(91.3) 0.000 0.156	(75)	(56.3) 0.000 4.138	(71.6) 0.044 1.749	(39.6) 0.000 6.679
Planning	(62.7) 0.000 0.154	(0)	(9.9) 0.000. 10.300	(22.7) 000. 3.643	(13.2) 000 6.646
Acceptance	(91.3) 0.000 5.350	(75) 0.000 3.472	(64.8) 0.000 2.777	(62.5)	(50.9) 0.000 0.173
Emotional support	(71.4) 0.000 0.453	(100)	(38) 0.000 3.66	(54.5) 0.04 1.651	(64.2)
Humour	(33.2)	(100) 5.212	(9.9) 0.000 (39.8)	(26.4)	
Positive reframing	(82.6) 0.000 0.170	(50)	(56.3) 0.035. 1.735	(38.6) 000. 4.745	(39.6) 000 3.765
Religion	(74.3)	(100)	(47.9) 0.000 4.289	(78.4)	(77.4)
Maladaptive					
Behavioural disengagement	(11.6) 0.000 9.458	(75) 0.000 0.118	(53.5) 0.000 0.280	(45.5) 0.000 0.402	(86.8) 0.000 0.040
Denial	(2.9) 0.000 4.841	(25) 0.000 0.176	(9.9)	(15.9) 0.000 0.243	(13.2)
Self-distraction	(37.3) 0.000 5.115	(75) 0.019 0.350	(62)	(76.1) 0.000 0.271	(62.3)
Self-blame	(8.7) 0.000 15.480	(75) 0.000 0.118	(53.5) 0.000 0.280	(53.4) 0.000 0.259	(86.8) 0.000 0.040
Substance abuse	(2.9) 0.030 2.840	(25) 0.000 0.107	(8.5)	(8)	(0)
Venting	(11.6) 0.000 20.455	(100)	(54.9) 0.001 0.399	(77.5) 0.000 0.100	(75.5) 000 0.145

and normal level (0-7) of anxiety and depression on HAAD scale.

Huizink et al[8] observed in his study that appropriate coping strategies were associated with less mental impairment, postnatal depression and pregnancy associated complications. Pregnant women should therefore be guided to adopt more adaptive coping strategies.

Regarding cultural background, accepted counselling and information should be provided to pregnant women and her family.

Maladaptive strategies were adopted by 17.9% of women in our study group. Maladaptive strategies are consistently reported to be associated with high level of psychological symptoms including anxiety and depression in adult and adolescence[15].

Significant association of maladaptive strategies was found in women with primary education as compared to more educated groups. Education of the community remains the key solution to all major problems which our population is facing.

Our study showed majority of pregnant women (58.9%) were using both adaptive and maladaptive strategies. Working women were not using adaptive strategies at all they were using mainly both types of coping strategies or maladaptive strategies. This is in contrast with the Spanish study[16] where the working women were using problem solving strategies. This could be one of the reasons of high frequency of anxiety and depression in working women as compared to housewives, observed in our previous study[14]. Psycho social care should be incorporated in interventional measures for pregnant women to optimise their mental health[17].

Renee J Thompson et al[18] highlights how both types of coping strategies adaptive and maladaptive differentially relate to each other depending on current mental health normal or depressed. They showed that in never depressed women the relationship of maladaptive coping has weaker association with depressive symptom in the presence of high level of adaptive strategies where as in depressed women maladaptive strategies were associated with more severe depressive symptoms in the presence of low levels of adaptive coping.

Pregnant women using both types of strategies therefore need to be educated and counselled by health care providers during antenatal visits so that they adopt adaptive coping strategies to deal with stressful events, anxiety and depression.

Women consistently use active coping, instrumental support, planning, emotional support and positive reframing with normal mental status in our study. Active coping and positive reframing has been shown to reduce depressive symptoms and pregnancy related stress[19]. Planning has been shown to be more consistently[20] used strategies showing sign of optimism. Women with anxiety and depression should be encouraged to use these strategies to overcome their stress levels[21].

Humour, a strategy considered to be adaptive was not significantly associated with normal mental health in our study however it was found to be protective for abnormal anxiety. Hence pregnant women can use this strategy as prevention against more severe levels of anxiety.

Acceptance is although an adaptive strategy, it was going against the normal behaviour in our study. American women had been shown to benefit with higher acceptance strategy whereas Japanese had shown no such correlation[22].

Behavioural disengagement, self-distraction, self-blame and venting was commonly used coping strategies in women with depression. Women using avoidance strategies were shown to have less attachment to foetus and impaired mental health[23].

Latendresse and Ruitz[24] observed that maternal placental corticotrophin levels are high with avoidance strategies which could lead to preterm labour[25]. These women should therefore be counselled to quit such strategies and adopt adaptive strategies.

Hundred percent women with borderline anxiety had a habit of venting in our study. Women with borderline anxiety and borderline depression were trying to deal with the situation by self-distraction such as sleeping, shopping and watching television.

Denial was associated with borderline anxiety and borderline depression in our study. Astrid et al[24] observed that women with more severe levels of anxiety are more likely to use coping strategies like denial and self-abuse. Self-abuse in our study was similarly associated with all levels of anxiety and depression.

Fortunately, substance abuse was used by minority of women in our study group which was shown to be significant risk factor for using other maladaptive coping strategies in some studies[23].

Majority of women in the study group used religion as coping strategies. Similar frequency of use of religion and prayer is reported by Borcherding et al. In a study from Karachi[26] majority of patients (male and female both) with anxiety and depression attending psychiatric department used practices and belief of religion to sought comfort. However, this strategy was found to be protective only for abnormal anxiety in our study. Similar finding was observed in Clements and Ermakova[27].

Our study showed that all maladaptive strategies studied if adopted will not lead to normal behaviour as significant negative association was found between these and normal behaviour.

In the context of pregnancy, limited studies are done to study the relationship of different coping strategies with anxiety and depression, for some types of adaptive strategies the result is mixed, maybe due to variation in sample and different design of the studies.

Health care providers involved in maternity units should have knowledge of adaptive and maladaptive coping strategies such as mental health of a pregnant woman will affect her quality of life and long term foetal and neonatal outcomes; it is highly recommended to support women in adopting positive coping strategies. In this regard, apart from incorporating screening tools for identifying anxiety and depression in antenatal care, psychiatric and social support services should be the parts of preventive obstetric services.

Conclusion

Adaptive strategies are protective for anxiety and depression whereas maladaptive are the risk factors for anxiety and depression. Health care providers should have a thorough knowledge of coping strategies. Pregnant women should be encouraged to adopt adaptive strategies to reduce the adverse outcome associated with anxiety and depression. Antenatal care services should include in its preventive package psychiatric and community social support to prevent and deal with anxiety and depression.

Conflict of Interest

Authors have no conflict of interests and no grant/ funding from any organisation for this study.

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