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Moderating Role of Pregnancy Between Coping Strategies and Positive and Negative Affect

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The purpose of this study was to investigate the moderating role of pregnancy among coping strategies and positive and negative affect in Pakistani women. The sample constituted of 200 married women (100 pregnant women & 100 non-pregnant women) aged between 20 to 40 years. The sample was selected through purposive sampling technique based on the cross-sectional research design. The married pregnant and non-pregnant women were inquired at the Gynecology and Obstetrics department of hospitals in Rawalpindi, Islamabad, and Taxila. Measures of Positive Affect and Negative Affect Scale (Watson, Clark, & Tellegen, 1988) and Brief Cope Scale (Carver, 1997) were used to assess positive and negative emotions as well as coping strategies among pregnant and non-pregnant married women, respectively. Results showed that pregnancy was a partial moderator between active avoidance coping, emotion focused coping, problem focused coping, religious coping, and positive affect and negative affect. The study recommended that pregnant women should be facilitated by controlling the negative affect, especially the women who were in their early adulthood as they had higher vulnerability towards affect influences. It would be accommodating for health and clinical settings to provide pregnant women with better psychological well-being ensuring their health and the health of their expected offspring.

Keywords: Coping strategies, positive affect, negative affect, pregnancy

The anticipation of parenthood and expecting a child is a joyous occasion for any woman (Hamilton & Lobel, 2008; Mosack & Shore, 2006). However, joyful being pregnant is a stressful phase for all women and can be a difficult time, because she deals with unclear

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situations (Hamilton & Lobel, 2008; Peñacoba-Puente, Carmona-Monge, Marín-Morales, & Naber, 2013) and major changes in life like accepting a new role, change in the relationships and responsibilities (Glazier, Elgar, Goel, & Holzapfel, 2004). The resultant stress of pregnancy is a risk to maternal health and well-being (Lobel, DeVincent, Kaminer, & Meyer, 2000), as not only the mother, but the expected child is also at the verge of health risk like premature birth, low birth weight and other fetal complications (Glazier et al., 2004). In order to overcome the stress caused by difficult situations, every individual makes an effort, these subjective efforts are known as coping strategies (Brickley, Coles, & Terry, 1994; Lazarus, 1993; Lazarus & Folkman, 1984).

Coping strategies may be both adaptive as well as maladaptive depending upon their contextual use (Lazarus & Folkman, 1984) and the coping strategies used by pregnant women act as a crucial variable determining in which way a woman manages the stresses of pregnancy while ensuring her own well-being as well as the well-being of her expected child (Peñacoba-Puente et al., 2013). Most of the work done on pregnant samples has included high risk pregnancies (Peñacoba-Puente et al., 2013). The current study includes the sample of pregnant women who have only mild complications and are otherwise experiencing a normal pregnancy.

Coping strategies are the behavioural and cognitive efforts, made subjectively by a person, to overcome the stressful situations in life that are more likely to bring about negative consequences (Lazarus & Folkman, 1984). Coping strategies maybe adaptive or maladaptive, depending upon the fruitfulness of the results obtained after their use (Lazarus & Folkman, 1984). If a coping strategy helps to resolve a problem and enables the individual to rise above the situation of distress, it is adaptive; while, if a coping strategy further complicates the problematic situation, causing the person more stress, it would be considered as maladaptive (Hamilton & Lobel, 2008; Mulder et al., 2002; Rudnicki, Graham, Habboushe, & Ross, 2001).

It is very unfortunate that there has been very little work done on pregnancy, the factors involved in inducing problems during pregnancy and how it is coped with to reduce the distress felt by the expecting mothers (de Tychey et al., 2005; Peñacoba-Puente et al., 2013). Normal pregnancy or low risk pregnancy is not a very largely approached factor, however, the work that has included the pregnant sample and their well-being is mostly conducted with samples that include high risk pregnancies and situations where stresses had been deliberately added, to see its effects that it has over the wellbeing of an expecting mother (Peñacoba-Puente et al., 2013). Other researches

that studied sample of expecting mothers, were either in domain of teenage pregnancies (Kaye, 2008; Myors, Johnson, & Langdon, 2001); pregnancies having high risks (Brisch, 2007; Demyttenaere, Maes, Nijs, Odendael, & Van Assche, 1995; Geerinck-Vercammen & Kanhai, 2003; Lowenkron, 1999); and in vitro fertilized pregnancies (Baor & Soskolne, 2010; Kirchner, Muñoz, Forns, Peñarrubia, & Balasch, 2011; Lukse & Vacc, 1999).

Although, the work carried out on the overall wellbeing of expecting mothers has been scarce, however, the researches have concluded that the active avoidant coping style is negatively influencing fitness and psychological wellbeing of pregnant women, not only that, its use is also detrimental for the fetal healthiness (Rudnicki et al., 2001). While, avoidance of an occurring problem is bad, positive styles of coping like social support have benefitting influences on the social emotion physiological and psychological wellbeing of expecting mothers (Rudnicki et al., 2001). Moreover, pregnant women are inclined to use religious coping more frequently than non-pregnant women, and this served as a fruitful strategy for them with regards to the mitigation of the stress a problem brings (Giurgescu et al., 2006; Hamilton & Lobel, 2008).

Affect is the subjective experience of feelings and/or emotions, it should be crucial important to assess affect because its the main source as well as result of related constructs like coping, different symptoms, socialization as well as other things (Watson et al., 1988). The Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) has been acknowledged to be one of the popular-most scales measuring affect (Buz, Pérez-Arechaederra, Fernández-Pulido, & Urchaga, 2015). This scale has repeatedly shown itself o be a reliable and valid instrument by fulfilling various psychometric test requirements (Watson et al., 1988).

After the original work on PANAS (Watson et al., 1988), further studies have been conducted to provide evidence of the said instrument. Furthermore, it should be noted that the association between the two affect types (positive and negative) is yet to be agreed upon by researchers, since several researches show support the correlation between the two factors (Sandin et al., 1999; Tuccitto, Giacobbi, & Leite, 2009); whereas other studies have been unable to find the correlation between two factors (Abadie et al., 2010; Crawford & Henry, 2004) and concluded that the two dimensions of affect are relatively independent of each other. A few studies (Leue & Beauducel, 2011; Ortuño-Sierra, Fonseca-Pedrero, Paino, i Riba, & Muñiz, 2015) reported more complex structures or did not obtain a

suitable fit to the data along all sorts of models which have been investigated (Melvin & Molloy, 2000; Molloy, Ant, & Kantas, 2001).

Positive mental health of a person includes their subjective satisfaction, which is assessed through their affect; positive emotional state (positive affect) and negative emotional state (Baker, Cesa, Gatz, & Mellins, 1992; Watson et al., 1988). According to the study of Carver, Sheier, and Weintraub (1989), the problem focused coping is an adaptive coping strategy and is directly associated to positive affect; while, negatively related to negative affect. Other studies also support the fact that problem focused coping is a significant predictor of positive affect (Dunkley, Zuroff, & Blankstein, 2003; Gunthert, Cohen, & Armeli, 2002; Park, Armeli, & Tennen, 2004). The coping model developed by Carver, Scheier, and Weintraub (1989), suggests that emotion focused coping strategies are adaptive most of the time and proven to be efficient in problem solving; however, the behavioral disengagement coping strategy or the active avoidance coping is maladaptive. This may lead to the inference that if women use the disengaged emotion focused coping, it becomes maladaptive for them increasing their negative affect (Ben-Zur, 2009). It should be noted that coping is a promoter of the mental health of a person and specifically their positive affect (Folkman, 2008; Folkman & Moskowitz, 2000).

The current study attempted to fill the gap identified by previous work indicating less exploration of mental health and well-being of pregnant women (de Tychey et al., 2005; Peñacoba-Puente et al., 2013; Rudnicki et al., 2001). It also investigates the role of coping strategies employed by expecting mothers and their vulnerability towards developing negative affect in light of using weaker coping strategies such as active avoidance coping. Therefore, the broader objectives of the study were to determine the moderating impact of pregnancy in the relationship between coping strategies and development of positive affect and negative affect among pregnant and non-pregnant women. It was also intended to explore the role of age of mother and development of positive affect and negative affect in pregnant and non-pregnant sample. The hypotheses to be tested in this research are as follows:

1. Active avoidance coping has a negative association with positive affect and positive association with negative affect in pregnant women.
2. Emotional support coping has a positive association with positive affect and negative relationship with negative affect in pregnant women.

3. Problem focused coping has a positive relationship with positive affect and negative relationship with negative affect in pregnant women.
4. Religious coping has a positive relationship with positive affect and negative relationship with negative affect in pregnant women.
5. The pregnant women in their early adulthood are more predisposed towards developing negative affect than those women in their late adulthood.

Method

Sample

The purposive sampling technique and a cross-sectional method was employed in current study. 200 married women of ages between 20 years to 40 years, was selected from the cities of the province of Punjab, Pakistan as the sample. The age range was kept between 20 years to 40 years because there is lower vulnerability towards developing pregnancy related complications in this age frame (Aasheim, Waldenström, Rasmussen, Espehaug, & Schytt, 2014). The hospitals visited, for data collection, were the Combined Military Hospital Rawalpindi, Military Hospital Rawalpindi, District Headquarter Hospital Rawalpindi, and the Tehsil Headquarter Taxila. Out of the 200 married women, 100 women were pregnant. The present stage or duration of the pregnancy of women in the pregnant married sample was not of significance to the current study. The sample of married pregnant women was randomly selected from the gynecology and obstetrics department of hospitals mentioned. The remaining sample of 100 was of married non-pregnant women. The sample of 100 non-pregnant married women was also randomly selected from hospitals, homes, and commercial institutes of the cities in Punjab.

Instruments

The measuring instruments used are as follows:

Brief Cope Scale. The coping strategies were measured using a self-report scale, called Brief Cope Scale developed by Carver (1997). It constituted of 28 self-report items that measure both adaptive and maladaptive coping skills. This instrument has been made to have 14 subscales, consisting of 2 items in all subscales. The author of this

instrument hasn't recommended any form of 2nd order factoring, while advising each researcher using it to form a model of their own using their own data. For this study the Brief Cope Scale measures four independent styles of coping; Active Avoidance Coping (items: 1, 4, 6, 9, 11, 13, 16, 19, 21, & 26), Emotional Support Coping (items: 12, 15, 17, 18, 20, 24, & 28), Problem Focused Coping (items: 2, 5, 7, 10, 14, 23, & 25), and Religious Coping (items: 3, 8, 22, & 27).

Positive Affect Negative Affect-Self Report (PANAS-SF). The PANAS-SF was developed by Watson et al. (1988) made for assessing positive and negative affect. This questionnaire has 10 items, including equal number of items to assess Positive Affect (e.g., active) and Negative Affect (e.g., scared). Participants responded to each item on a 5-point Likert scale with response options ranging from (1) *Very slightly or not at all* to (5) *Extremely*. Possible score range on each subscale could fluctuate from 5 to 25 with higher scores indicating more presence of that type of affect.

Procedure

Official permissions were acquired from the institutional heads of the hospitals and the sample of pregnant women was approached from the gynecology and obstetrics ward of the above-mentioned hospitals. All the subjects were first given information about the study and their informed consent, for participation in the study, was taken. All the relevant questions of the participants were accordingly answered. Once the questionnaire booklet was filled, the subjects were debriefed about the purpose of the research and their resultant ambiguities were solved.

Results

Once the collection of data had been completed, all gathered data were input in the SPSS version 18.0, where it was screened for missing values. After dealing with the missing values, the data was computed scale wise. Moreover, reliabilities of the scales and subscales were determined and correlations among variables were tabulated. Regression analysis was performed by AMOS to find the moderating role of pregnancy between the coping strategies and positive affect and negative affect.

Table 1

Correlation Matrix for Coping Strategies, Positive Affect and Negative Affect among Pregnant and Non-Pregnant Women (N = 200)

Variables	α (P)	α(NP)	1	2	3	4	5	6	7	8
1 BCS	.85	.75	-	.86**	.78**	.48**	.61**	.43**	.26**	.40**
2 AAC	.71	.68	.80**	-	-.52**	-.53**	-.48**	.36**	-.29**	.44**
3 PFC	.79	.70	.65**	.25*	-	.55**	.34**	.35**	.24*	-.30**
4 EFC	.74	.71	.70**	.41**	.34**	-	.30**	.30**	.24*	-.23*
5 RFC	.41	.72	.66**	.48**	.26**	.27**	-	.45**	.35**	-.21*
6 PANAS	.81	.78	.01	.08	.15	.11	.11	-	.74**	-.80**
7 PA	.73	.74	.02	.02	.07	.15	.12	.73**	-	-.70*
8 NA	.70	.77	.01	.01	.15	.01	.04	.72**	-.66**	-

Note. α (P) = alphas acquired for pregnant sample; α (NP) = alphas acquired for non-pregnant sample. Values above the diagonal = pregnant sample; Values below the diagonal = non-pregnant sample. BCS = Brief Cope Scale; AAC = Active Avoidance Coping; PFC = Problem Focused Coping; EFC = Emotion Focused Coping; RFC = Religious Focused Coping; PANAS = Positive Affect and Negative Affect; PA = Positive Affect; NA = Negative Affect.
*$p < .01$. **$p < .00$.

In Table 1, values above the diagonal reveal relationships between coping strategies and positive affect and negative affect among pregnant women. It has been found that active avoidance coping is negatively correlated with positive affect and positively correlated with negative affect. In Table 1, values below the diagonal reveal relationships between coping strategies and positive affect and negative affect among non-pregnant women. Results reveal that active avoidance coping and emotion focused coping does not associate with positive affect and negative affect in non-pregnant women. Furthermore, the results exhibit that problem focused coping and religious focused coping are negatively related with positive affect and negatively associated with negative affect in relation to non-pregnant women.

Results of independent sample *t*-test showed that there is nonsignificant difference for positive affect ($t = .79$, $p > .37$) among women of early adulthood ($n = 32$, $M = 17.65$, $SD = 3.56$) and adulthood ($n = 170$, $M = 18.90$, $SD = 3.84$) with regard to age at which women gets pregnant. Similar pattern is observed for negative affect ($t = .34$, $p > .55$) depicting nonsignificant difference between women getting pregnant at early adulthood ($n = 32$, $M = 15.60$, $SD = 3.77$) and adulthood ($n = 170$, $M = 16.50$, $SD = 4.03$).

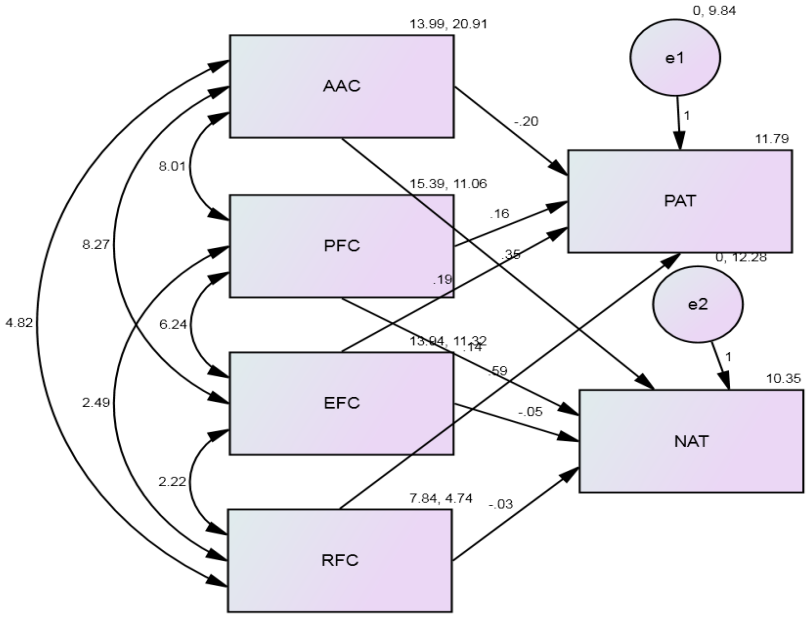

Figure 1. Effect of coping strategies (AAC, PFC, EFC & RFC) on positive affect (PAT) and negative affect (NAT) in pregnant women.

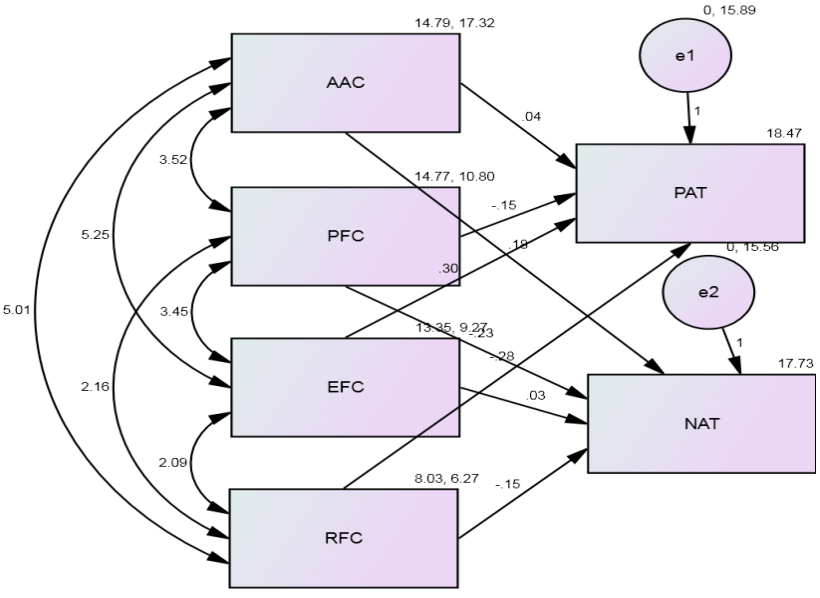

Figure 2. Effect of coping strategies (AAC, PFC, EFC & RFC) on positive affect (PAT) and negative affect (NAT) in non-pregnant women.

Table 2

Direct and Indirect Effects for Pregnant Women (N = 100)

Coping Strategies	Positive Affect			Negative Affect		
	B	*S.E*	*β*	*B*	*S.E*	*β*
AAC	-.20	.09	-.26**	.35	.10	.41**
PFC	.15	.12	.15	.13	.13	.11
EFC	.19	.11	.18	-.05	.13	-.04
RFC	.59	.16	.37**	-.02	.18	-.01

Note. AAC = Active Avoidance Coping; PFC = Problem Focused Coping; EFC = Emotion Focused Coping; RFC = Religious Focused Coping.
** $p < .001$.

This conditional model fits the data sufficiently, $\chi^2/df = 2$, RMSEA = .06, CFI = .99, NFI = .98, TLI = .87. The results reveal that active avoidance coping significantly predicts positive affect and negative affect among pregnant women. On the other hand, results reveal that emotion focused coping and problem focus coping do not predict positive affect and negative affect across pregnant women. In addition, religious coping significantly predicted positive affect but failed to predict negative affect.

Table 3

Direct and Indirect Effects for Non-pregnant Women (N =100)

Coping Strategies	Positive Affect			Negative Affect		
	B	*S.E*	*β*	*B*	*S.E*	*β*
AAC	.04	.11	.04	.17	.11	.18
PFC	-.14	.13	-.11	-.22	.13	-.18
EFC	.30	.15	.22*	.03	.14	.02
RFC	-.28	.18	-.17	-.14	.18	-.09

Note. AAC = Active Avoidance Coping; PFC = Problem Focused Coping; EFC = Emotion Focused Coping; RFC = Religious Focused Coping.
* $p < .01$.

Table 3 shows that only emotion focused coping positively predicts positive affect; however, it does not predict negative affect. Conversely, results show nonsignificant predictive role of active avoidance coping, problem focused coping and religious focused coping in positive affect as well as negative affect among non-pregnant women.

Discussion

The current study, firstly, aimed to find the negative relationship of the active avoidance coping with positive affect and a positive

relationship with the negative affect in the pregnant women. The result of this study revealed that, indeed, the use of the active avoidance coping mechanism by pregnant women increases their negative affect and reduces the positive affect. Active avoidant coping is a maladaptive coping strategy and its use makes pregnant women highly susceptible to developing negative affect (Ben-Zur, 2009; Carver et al., 1989). The use of the active avoidant coping is not recommended, instead of enabling the expecting mother to find a solution to their problems, it increases their distress (Borcherding, 2009).

Secondly, an aim of the study was also to find the positive relationship of emotion focused coping with positive affect and negative relationship with negative affect in Pakistani pregnant women.

The study's results have revealed that emotion focused coping is a neutral coping mechanism. Hypothesis number 2 is reported in Table 1 of correlation. Hypothesis number 2 has been partially approved in current study. The results revealed in Table number 1 that emotion focused coping was positively related to positive affect and negative affect as well. Results relevant to the use of emotion focused coping strategy have been reported in Table 1 for non-pregnant women. The results revealed that this coping strategy has a nonsignificant relationship with positive affect and negative affect. The results are in accordance with the word of Lazarus and Folkman (1984), where it is clearly notified that while emotion focused coping in often impeding to the alleviation of distress, it is sometimes helpful too. Hence, emotion focused coping can go both ways, it depends upon the context of the situation where emotion focused coping is being employed (Lazarus & Folkman, 1984; Peñacoba-Puente et al., 2013).

Regarding hypothesis number 3, which stated that there is a positive relationship between problem-focused coping and positive affect as well as the negative relationship between problem-focused coping and negative affect. The outcome of correlation analysis shows that hypothesis number 3 is partially approved, showing that there is a positive and significant relationship between problems focused coping and positive affect. This is a clear indication of the effectiveness and the adaptiveness of the problem focused coping mechanism. The more it is used the better it will be as it will ensure the increase in positive affect of pregnant women. While this is true, it is also reported that since hypothesis number 3 has been partially disproved, suggesting that pregnant women using the problem focused coping strategy, in Pakistan, lean more towards developing negative affect. Moreover, the

results of Table 1 show that problem focused coping has a nonsignificant relationship with the positive affect and negative affect of non-pregnant women, indicating that the problem focused coping is not necessarily the best mechanism for women in Pakistan.

This is again a confirmation of the words of Lazarus and Folkman (1984), where problem focused coping though is largely attributed as an adaptive coping strategy, can sometimes add on to the problem rather than reducing the distress it causes (Peñacoba-Puente et al., 2013).

The fourth aim of this research was to attest the positive and significant relationship of religious coping strategies with positive affect and the negative significant relationship between religious focused coping and negative affect. The outcomes of the correlation analysis show that hypothesis number 4 is partially approved, suggesting that if religious coping is used by pregnant women it will help reduce their tendency to develop negative affect and lead them towards the development of positive affect. However, hypothesis number 4 has been partially refuted as well, proposing that the use of religious focused coping, by Pakistani pregnant women, is associated with negative affect too.

These results of hypothesis number 4 correspond to the word of previous researches; spiritual healing and finding relief from distress in one's religion is common and beneficial for the health and well-being of pregnant women (Borcherding, 2009; Giurgescu et al., 2006; Hamilton & Lobel, 2008), while this is correct, it should be noted that religious coping is an individual domain in the coping strategies and its role is yet controversial, studies suggest that sometimes religious coping strategies are impeding the development of positive affect, and instead lead a person towards the denial of a problem and hence, encourages the development of negative affect (Carver, 1997; Cook & Heppner, 1997; Folkman & Moskowitz, 2004; Hudek-Knežević, Kardum, & Vukmirović, 1999; Koenig, Larson, & Larson, 2001; Lyne & Roger, 2000; Parker & Endler, 1992; Seybold & Hill, 2001; Tamres, Janicki, & Helgeson, 2002).

An additional aim of the current study was to examine the difference of degree of negative affect and positive affect among women in the early and middle adulthood, the *t*-test analysis was run on SPSS, to see the difference between pregnant women of the two age groups. The results of the hypothesis number 5 are reported in table number 3 of the *t*-test. The results revealed that there is no significant difference between the subjective positive affect and negative affect of pregnant women in Pakistan. Studies have

suggested that positive affect and negative affect is not influenced by the age of a person, these are subjective feelings of a person and are totally independent of how old a person is or how diverse they are in matters of their other demographic data (Ben-Zur, 2002, 2009; Ben-Zur & Reshef-Kfir, 2003).

Moderation was analyzed through Analysis of Moment Structure (SEM) to check pregnancy's status as a moderator between coping strategies, positive affect and negative affect. The results are tabulated in Table 2 and 3, it is revealed that indeed the model fits. As suggested by the Lazarus and Folkman (1984), it is found that pregnancy acted as a partial moderator in the relationship between all the four types of coping strategies and positive and negative affect. Problem focused coping, emotion focused coping, active avoidance coping and religious focused coping are all helpful in some situations while in other situations these coping strategies can become an obstacle towards the development of positive affect in pregnant women. Even coping mechanisms like problem focused coping, that are known to be adaptive, impede the alleviation of distress (Lazarus & Folkman, 1984; Peñacoba-Puente et al., 2013). Results shows that the status of non-pregnancy in women is also a partial moderator between coping strategies, positive affect and negative affect. The use of emotion focused coping enhances the development of positive affect in married, non-pregnant women; however, the use of any other strategy neither encourages the development of positive affect nor negative affect.

Limitations and Suggestions

The current study is a small effort made in the indigenous context. It is one of the initial steps made with the hope of increasing awareness among the Pakistani public in regards to the risks imposed on the social, emotional, physical, and most importantly, the psychological health of the pregnant women. The current study only includes pregnant women with normal and very low risk pregnancies; and did not included teenage pregnant sample. Future researches can target the teenage and high-risk pregnancies from the Pakistani population in order to see the development of negative affect and positive affect in them. Moreover, further research can be conducted to see the effect of demographic variables such as socioeconomic status, family system, and birth order on the psychological health and well-being of pregnant women. Lastly, the present research has included the sample of pregnant women only from a selected few hospitals of the province of Punjab, work done in the future can

include the sample from all the four provinces of Pakistan to see the trends of positive affect and negative affect in pregnant women from all across the country. This increases the validity of the findings of this research.

Implications

This research will be very helpful for the doctors, medical and nursing staff working with the pregnant women in the gynecology and obstetrics departments that work alongside them regularly. It will be very beneficial for them to become acquainted with the knowledge of how pregnant women have different emotional needs than non-pregnant women. They would be enabled to handle fluctuations in the mood of pregnant women more appropriately and resolve their ambiguities that may or may not result from their emotional fluctuations. Secondly, the study will be highly applicable to the lives of pregnant women themselves as they will be aware of the fact that, with changes in their physiological states they are likely to go through psychological changes. They will understand their mental state of mind better and hence, manage their emotions more appropriately. Pregnant women will be able to choose more positive coping strategies that will ensure their psychological well-being which will consequently ensure the health of the child they are expecting. Lastly, this study will be a very significant achievement in changing the mindset of the spouses and extended families of pregnant women in Pakistan. The families will be capable of understanding the demand of a pregnancy in a healthier way and help the expecting mother to deal with her changing physiological and psychological state.

Conclusion

Pregnancy is a life altering event for couples who are expecting the child and most importantly for the mother who has conceived the baby. With changes in body, responsibility and the general outlook at life, stressfulness and opposing situations are bound to accompany this major milestone in life. To deal with these adversities in life it is necessary that pregnant women use, some kind of a skill to manage their distress and changing degrees of both types of affects. Coping strategies employed may be of any kind and no matter which strategy is used, that may be effective or ineffective. The efficiency of a coping mechanism depends upon the situation that requires some kind of a measure to be used. If the context of the problematic situation requires the employment of a problem focused approach it will prove to be

successful, if it requires an emotional outlook, the problem focused strategy will inevitably fail. Given that coping strategies are only partially significantly related to pregnancy, all of the strategies used need to be used with a sound mind and emotional intelligence.

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