PREDISPOSITION OF EARLY MALADAPTIVE SCHEMAS AND POSTPARTUM DEPRESSION DURING COVID-19 CRISIS: MEDIATION OF MINDFULNESS

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SUMMARY

Background: Past studies provide crucial evidence that pregnancy and childbirth increase the risk of emotional vulnerability and instability. Current research intends to explore the role of early maladaptive schemas and mindfulness as determinants of postpartum depression for expecting mothers during COVID-19 pandemic.

Method: The data was collected from 170 expecting mothers who conceived and gave birth during the COVID-19 pandemic. Edinburgh postnatal depression scale, the young schema questionnaire-SF 75 items, and the Kentucky inventory for mindfulness scale were administered.

Results: Results discovered that mindfulness partially mediated the relationship between three kinds of early maladaptive schemas and postpartum depression.

Conclusion: Mindfulness-based control techniques can be considered to buffer the impact of the early maladaptive schemas on postpartum depression, for mothers who give birth during any challenging time.

Key words: early maladaptive schemas – mindfulness - postpartum depression - COVID-19

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INTRODUCTION

The psychological, social and economic impact of the COVID-19 pandemic has been insurmountable for nations worldwide. People around the world who were already suffering with various mental health issues have reported that the level of uncertainty and fear has substantially increased during the past few months (Rajkumar 2020, Waqas et al. 2020). Coronavirus has affected some segments of society more than others. For instance, women who are pregnant or who have given birth recently are considered the most vulnerable during the spread of this novel disease. According to (Merle-Fishman 2010) a woman needs to completely reorganize herself as a human after delivery, as it is an extremely complex psychological process giving birth to a breathing soul. Every mother's experience and outcome of becoming a mother can vary based on their individual relationship experiences and early life recollections. Lots of possible injuries and negative experiences during the process of becoming a mother are supplemented by intense emotional fluctuation, anxiety, and a state of ambivalence. Most pregnant women, it could be argued, overcome countless challenges during the period of pregnancy and postpartum, but it has also been witnessed that a proportionate number of mothers find it enormously difficult to recover from postpartum depression (Nagy et al. 2011). Almost fifteen percent of mothers suffer from postpartum depression yearly (Anokye et al. 2018).

Depiction of early life experiences with the primary caregivers and the cognitive-affective content of the internal working models (Bowlby 1973) can be examined effectively through early maladaptive schemas. These schemas are based on mother-infant interactions (Young et al. 2003a), organized through the dimensions of one's self and other people. Maladaptive schemas are both self-fulfilling in nature and stable over time and they profoundly affect the adult attachment. (Thimm 2010) emphasized that people may permanently live within maladaptive schemas which are a pattern of established (from childhood), unstable reactions to any given situation in life. These schemas are generally activated by the triggers of early life incidents. As soon as these schemas are activated, individuals are overwhelmed by intense and disturbing negative emotions like fear, anger, and shame.

Molnár et al. (2018), inspected postpartum depression by analyzing the initial relationship experiences of mothers about their early maladaptive schemas. Results of the study confirmed a noteworthy direct effect of maladaptive schemas on postpartum symptoms. Postpartum depression can also be blamed at times for deteriorating the mother-child relationship and can affect the mother's social and personal life. Considering the possible relationship between early maladaptive schemas and postpartum depression, current research has explored the role of mindfulness as a possible mediator.

A large number of systematic reviews and meta-analyses have revealed positive relationships between mindfulness and mental health (Desrosiers et al. 2013) and the positive effects of using mindfulness-based interventions for psychological problems, particularly in depression, anxiety and stress (Eberth & Sedlmeier 2012, Khoury et al. 2013). The concept of mindfulness has its roots in Buddhist philosophy (Segal et al. 2018)

which has recently been embraced by Western psychology. Cecero et al. (2008), studied the relationships between the early maladaptive schemas of the disconnection, rejection domain, and psychological mindedness; a construct which is related to mindfulness (Bishop et al. 2004). Except for the abandonment schema, the authors found reasonable negative relationships between early maladaptive schemas and psychological mindedness. The study of (Fischer et al. 2016) has reported a correlation of -0.61 between a total early maladaptive schema severity score and the mindful attention awareness scale.

According to previous literature (Carmody & Baer 2008a, Paul et al. 2013a, Radford et al. 2014a) mindfulness has an inverse association with a number of depressive disorders and their indicators, but mindfulness had a positive relationship (Brown & Ryan 2003, Cousin & Page 2015) with sense of autonomy, satisfaction and also with the clinical and non-clinical environment. It has also been witnessed that mindfulness allows individuals to stay away from depression triggers (Coffey & Hartman 2008, Evans & Segerstrom 2011). It also helps to extracate attention from triggers that prolong the depressive symptoms (Garland et al. 2011). Furthermore, a recently performed meta-analysis revealed that levels of mindfulness is positively associated with psychological and physical well-being, and it is negatively associated with depressive and emotional symptoms (Keng et al. 2011).

To date, only two studies have played a significant role in examining the association between mindfulness and early maladaptive schema. Shorey et al. (2015) has analyzed the relationship between mindfulness and early maladaptive schemas on a group of addicts recovering from the habit of substance abuse. A consistently negative correlation was found between mindfulness and early maladaptive schemas. Furthermore, people who endorsed early maladaptive schemas were found to have considerably lower levels of mindfulness and vice versa. In addition, a study by Shorey et al. (2015) with female sample (*N*=67), revealed that in twelve out of eighteen cases, higher levels of mindfulness was found to be inversely related to most of the early maladaptive schema. Moreover, individuals with more than one early maladaptive schemas had lower levels of mindfulness when compared to the individuals who had zero or one early maladaptive schemas. Both studies backed the idea that development of early maladaptive schemas during early life may influence individuals to have a diminished aptitude for mindfulness because of mindless coping strategies learned.

Since the previous understanding on the topic is limited, current research would play a significant role in enlightening the function of early maladaptive schema in determining postpartum depression. Including mindfulness with schema therapy is proposed to increase the person's ability to focus on the "here and now", leading a better awareness of maladaptive cognitive schemas. This research was thus performed to analyze the mediating role of mindfulness between early maladaptive schemas and postpartum depression during a crisis.

METHOD

Participants

The present study involved 170 married women who conceived and gave birth during the period of COVID-19. The demographic characteristics of participants were noted to control for covariates and later converted to categorical variables. 60% of the participants ranged between 18 to 22 years of age, 18% ranged between 23 to 27 years, 32% ranged between 28 to 32 years, 9% between 33 to 37years and 7% between 38 to 43years. Some other properties that were noted along with age were total number of Children, Education (Illiterate [8.7%], 01 to 05 year of education [5.3%], 06 to 10 years of education [41.3%], 11 to 16 years of education [44.7%]), duration after childbirth (01 to 12 weeks [49.3%], 13 to 25weeks [14.0%] and 26 to 36 weeks [36.7%], Duration of marriage (11 to 53 months [40.7%], 54 to 96 months [40.7%] 97 to 139 months [11.3%] and 140 to 180 months (7.3%), Number of family members diagnosed with COVID-19 (None [52%], one member [40%], two members [6%], three members [2%], and 4 or more than 4 members [1%]) and the type of birth (C-section [44%] and vaginal delivery [56%]).

Procedure

Correlation research design was employed, and the data was collected through Purposive sampling strategy considering the women who conceived and gave birth after the outbreak of COVID-19 pandemic. Inclusion criteria considered women who were in their first trimester when the outbreak hit the country. This research was conducted following the approval of the [Masked for review]. Urdu translated versions of the instruments were used in the process of data collection. The permission for usage and translation of the required instrument was sought and the ethical rules and regulations were followed during the process of data collection. Data was collected in-person through a 'paper pen' method from the maternity clinics with referrals of concerned gynecologists. The respondents were informed about their right to withdraw at any time and that their response would remain confidential and anonymous.

Measures

The instruments administered in the present research include.

Demographic Questionnaire

A demographic information questionnaire inquired as to the respondents' age, number of children, education, duration of marriage, duration of elapsed time since childbirth, family income, family system type of childbirth, and number of family members diagnosed with COVID-19.

Edinburgh Depression Scale
(Alina Naveed & Malik 2015)

Edinburgh Depression Scale is a self-report 10-item based questionnaire. EPDS was developed for examining postpartum depression. Each item of the questionnaire has four choices from 0 ''As much as I always could'' to 3 ''Not at all''. Questions no 1, 2, & 4 are scored 0, 1, 2 or 3 with top box scored as 0 and the bottom box scored as 3. Questions no 3, 5, 10 are measured in reverse order, with the top box scored as a 3 and the bottom box scored as 0. A score ranging from 1 to 8 indicates depression is not likely, a score ranging from 9 to 11 suggests possible depression, a score between 12 to 13 suggests high depression and a score of 14 and above suggests severe depression. The total score of the scale was taken by adding the scores of each of the 10 items (Cox et al. 1987). The Cronbach's Alpha for Urdu translated scale was α=0.84 (Noorullah et al. 2020).

The Young Schema Questionnaire (Young 1998)

The Young Schema Questionnaire is a 75-item based self-report questionnaire that measured the presence and severity of 15 out of 18 early maladaptive schemas. YSQ-SF's 15 Schemas are Disconnection/ Rejection (defectiveness/shame, abandonment/instability, social isolation/alienation, mistrust/abuse, emotional deprivation), Impaired autonomy/Performance (enmeshment/undeveloped self, failure, dependence/incompetence, vulnerability to harm or illness), Impaired Limits (insufficient self-control/self-discipline, entitlement/ grandiosity), Other Directedness (subjugation, self-sacrifice) and Over vigilance/Inhibition (emotional inhibition and unrelenting standards/hypocriticalness. Each of the 15 subschemata consists of five items and every question is rated on a six-point Likert-type scale starting from 1 that is "does not relate to me" to 6 as "describes me perfectly". Young schema questionnaire-SF internal consistency using Cronbach's alpha was reported as α=0.95 (Yousefi et al. 2018). Adequate internal consistency was found for Urdu translated schema subscales with Cronbach's alpha ranging from α=0.607 to α=0.876 and the overall scale reliability for the current study was α=0.957.

Kentucky Inventory of Mindfulness Skills (KIMS)
(Baer et al. 2004a)

The Kentucky Inventory of Mindfulness Skills is one of the most commonly used questionnaires (Baer et al. 2004b). The KIMS consists of 39 items in the form of statements that are evaluated on a five-point Likert scale extending from 1 (never or rarely true) to 5 (always or almost always true). The KIMS measures four theoretical elements of mindfulness including describing, observing, acting with awareness and accepting without judgment (Baer et al. 2004c). Scores included for analysis in the present study included total scores across each facet of mindfulness. The present study found the KIMS to have adequate internal consistency overall α=0.771 and with internal consistency ranging from α=0.604 to α=0.787 across subscales.

RESULT

The analysis of results was carried out using SPSS 22.0 and Smart PLS.2. The research explored direct and indirect association between early maladaptive schemas, mindfulness and postpartum depression in the period of the COVID-19 pandemic. Early maladaptive schemas (Over-vigilance/Inhibition, Disconnection/Rejection, Impaired Limits, Other Directedness, Impaired autonomy/Performance) was considered as an independent variable, mindfulness (Act with awareness, Observe, Describe, and Accept without Judgment) was considered as a mediating variable and the postpartum depression was measured as a dependent variable in the path analysis. As can be inferred in Table 1, the mean score for Edinburgh Depression Scale (M=11.08, Sd=5.94) was marginally higher than the normative mean from non-clinical sample (M=9.02, Sd=4.94) and the scores ranged between 0 to 27 (Thombs et al. 2015). (Table 1).

The results of correlation analysis suggested that postpartum depression has a significantly negative relationship with regards to mindfulness (r=-0.286, p<0.01) and its two domains namely, describe and act with awareness (r=-0.265 and -0.341 respectively p<0.01). However, postpartum depression had a significantly positive relationship with early maladaptive schemas and its schemas (Disconnection and Rejection, Impaired autonomy, Impaired limit and Over vigilance) (r=0.294**, 0.184*, 0.312**, 0.212** and 0.256**).

The mediation relationship of mindfulness with postpartum depression and early maladaptive schemas was computed using the Smart PLS2 software. Path coefficients were later transformed into t statistics using bootstrapping (Sarstedt et al. 2017a). Dimension vise results have been presented in figure 1 and comprehensive results are explained in table 2.

Direct and indirect relationships were analyzed through the bootstrapping technique. Figure 1 shows direct relationships between early maladaptive schemas, mindfulness and postpartum depression. Significantly, a direct relationship was observed between over vigilance/ inhibition and mindfulness, disconnection/ rejection schema and mindfulness and impaired autonomy schema and mindfulness (t=2.94***, 4.21***, 2.26*). Mindfulness that was hypothesized as a mediator, showed a significantly direct relationship with the dependent variable i.e., postpartum depression (t=3.78, p<0.000). Preacher & Hayes (2008) interpretation method was used for analyzing indirect effects and it was suggested that for the mediation, indirect relationships must not straddle a "0" "zero". The strength of mediation was analyzed by calculating Variance Accounted for values (VAF). Following the rule of thumb (Sarstedt et al. 2017b), if the VAF is found less than 20% of the mediation does not exist. However, a VAF value larger than 20% and lesser than 80% is characterized as partial mediation.

Table 1. Inter-correlation and descriptive statistics of research variables

	Variables	M(SD)	2	3	4	5	6	7	8	9	10	11	12
1	Postpartum Depression	11.08(5.94)	-0.286**	0.029	-0.265**	-0.341**	-0.159	0.294**	0.184*	0.312**	0.212**	0.149	0.256**
2	Mindfulness	119.74(13.22)	1	0.554**	0.718**	0.530**	0.271**	-0.124	0.173*	-0.090	-0.019	-0.141	-0.232**
3	Observe	38.23(9.50)		1	0.407**	-0.170*	-0.497**	0.426**	0.474**	0.397**	0.462**	0.254**	0.334**
4	Describe	25.28(4.90)			1	0.229**	-0.061	0.041	0.272**	0.027	0.135	-0.003	-0.073
5	Act with awareness	30.72(4.94)				1	0.379**	-0.472**	-0.229**	-0.454**	-0.340**	-0.345**	-0.462**
6	Accept without judgment	25.50(6.72)					1	-0.529**	-0.360**	-0.424**	-0.539**	-0.381**	-0.535**
7	Early Maladaptive Schemas	253.77(65.40)						1	0.788**	0.922**	0.831**	0.725**	0.742**
8	Disconnection and Rejection	79.80(15.53)							1	0.667**	0.606**	0.451**	0.410**
9	Impaired autonomy	64.38(22.31)								1	0.714**	0.570**	0.576**
10	Impaired limit	35.00(10.84)									1	0.579**	0.670**
11	Other-directedness	38.08(10.14)										1	0.661**
12	Over vigilance	37.70(9.88)											1

** Correlation is significant at the 0.01 level (2-tailed);   * Correlation is significant at the 0.05 level (2-tailed)

Table 2. Mediation through Mindfulness on Early Maladaptive Schemas and Postpartum Depression

Variables	β	M (Sd)	t	p value	Percentile Bootstrap, 5%, LL - 95%, UL CI	VAF	Type of Mediation
Disconnection and Rejection->Mindfulness-> Postpartum depression	-0.108	-0.104 (0.035)	3.100	0.002	-0.163; -0.046	0.54	Partial
Impaired autonomy and performance->Mindfulness-> Postpartum depression	0.071	0.069 (0.039)	1.837	0.067	0.014; 0.137	0.21	Partial
Impaired limits->Mindfulness-> Postpartum depression	-0.048	-0.049 (0.038)	1.264	0.207	-0.115; 0.008	0.11	None
Other-directedness->Mindfulness-> Postpartum depression	0.061	0.017 (0.027)	0.607	0.544	-0.020; 0.066	0.13	None
Over vigilance and inhibition->Mindfulness-> Postpartum depression	0.087	0.087 (0.039)	2.209	0.028	0.030; 0.161	0.42	Partial

Note: UL - upper level;   LL - lower level;   VAF - variance accounted for values

Table 3. Hierarchical Regression Analysis Predicting Postpartum Depression (N=170)

Predictors	Model 1	Model 2	Model 3
Early Maladaptive schemas R^2=0.118			
Disconnection and Rejection	-0.017 (0.042)	0.091 (0.042)	0.001 (0.021)
Impaired autonomy and performance	0.335** (0.034)	0.263** (0.033)	0.076 (0.017)
Impaired limits	-0.086 (0.071)	-0.038 (0.069)	-0.061 (0.034)
Other-directedness	-0.122 (0.065)	-0.138 (0.063)	-0.019 (0.030)
Over vigilance and inhibition	0.208 (0.072)	0.121 (0.071)	0.006 (0.035)
Mindfulness ΔR^2 0.178			
Mindfulness		-0.270*** (0.037)	-0.144*** (0.020)
Demographic Characteristics ΔR^2 =828			
Age			-0.286*** (0.496)
Number of Children			-0.139*** (0.750)
Education			-0.143*** (0.323)
Family system			-0.039 (0.944)
Family Income			0.078* (0.239)
Duration after childbirth			-0.143 (0.534)
Duration of marriage			0.093** (0.269)
Type of childbirth			-0.325*** (0.737)
Number of family members diagnosed with COVID-19			0.118*** (0.361)

* $p<0.05$;   ** $p<0.01$;   *** $p<0.001$
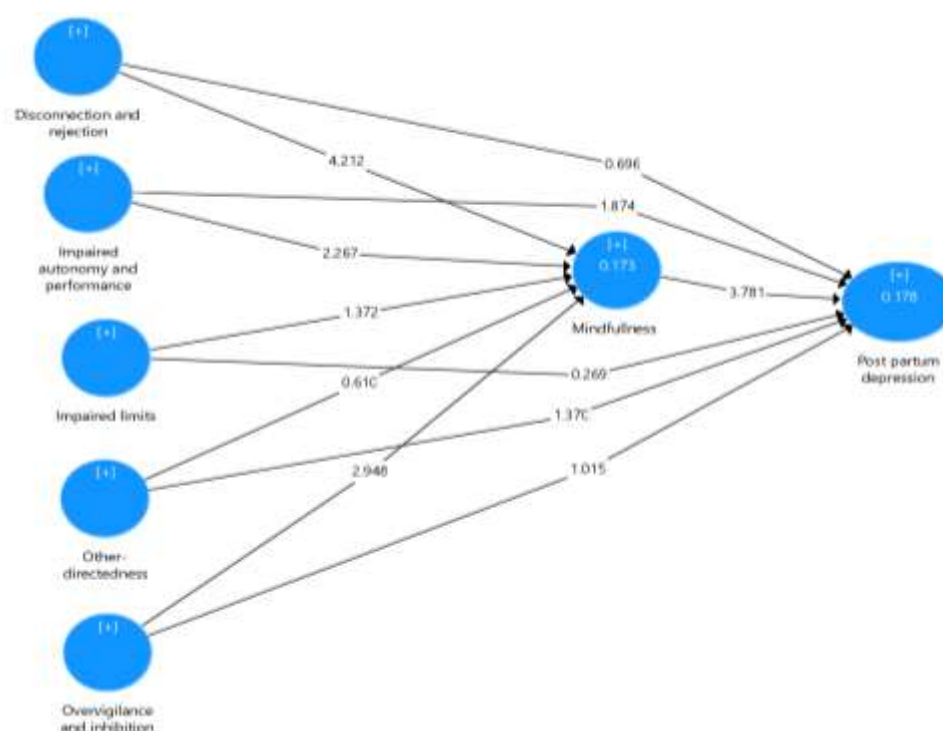
Figure 1. Mediation analysis: early maladaptive schemas, mindfulness and postpartum depression

The bootstrap analysis suggested that the indirect effect of two early maladaptive schemas namely, impaired limits and other directedness, showed an insignificantly indirect path with relation to mindfulness and postpartum depression (β=-0.048, *t*=1.26; β=0.061, *t*=1.26). Also, the VAF of these insignificant indirect paths was below 0.20. Three early maladaptive schemas, namely disconnection/rejection, impaired autonomy/performance and over vigilance/inhibition showed significant partial mediation through mindfulness to postpartum depression (β=-0.108, *t*=3.10; β=0.071, *t*=1.83; β=0.087, *t*=2.20). VAF values for partial mediations were between 0.20 to 0.80. Thus, from these results, we can say that partial mediation exists between three domains of early maladaptive schemas, mindfulness and postpartum depression. Further impaired limits and other directedness did not suggest mediating indirect relationship with postpartum depression.

As can be seen in Table 3, we applied a hierarchical regression to investigate the predictive effects of early maladaptive schemas on postpartum depression after controlling for mindfulness and demographic characteristics. In model 1, we analyzed 5 early maladaptive schemas; in model 2 mindfulness, and in model 3 demographic

characteristics were compared for predictive strength towards postpartum depression. In the first model, EMSs were added to check independent predictive nature and only one of the early maladaptive schemata (Impaired autonomy and performance) appeared to predict the dependent variable (β=0.335, p<0.01). In model 2, mindfulness appeared to significantly predict the dependent variable (β=-0.270, p<0.001). In model 3, demographic characteristics were considered in order to explore their predictive capacities in terms of postpartum depression. The overall model suggested that age (β=-0.286, *p*<0.001), number of children (β=-0.139, *p*<0.001), years of education (β=-0.143, *p*<0.001), family income (β=0.078, *p*<0.05), duration of marriage (β=0.093, *p*<0.01), type of childbirth (β=-0.325, *p*<0.001) and number of family members diagnosed of COVID-19 (β=0.118, *p*<0.001) predict for 82% of variance in postpartum depression during the phase of COVID-19 pandemic.

DISCUSSION

A wide range of research has been conducted to understand the psychopathological effects of traumatic events experienced on a global scale, such as earthquakes, floods and epidemics, and their detrimental association with depressive symptoms (Ahmed et al. 2020, Avraham 2020, Baibazarova et al. 2013, Maunder et al. 2003, Nguyen et al. 2020, North & Pfefferbaum 2013a, Sade et al.2020). Researches assert that a disaster does not only affect the victims but also the people with any indirect connection to it (Foa et al. 2006, North & Pfefferbaum 2013b). From a speculative viewpoint, several theories might simplify the relationship between mental disorders and natural disasters. According to Perkonigg et al. (2000) instant traumatic experience of a natural disaster, accompanied by undesirable life events, can be extremely terrifying, for instance, the death of a loved one or the loss of job.

Researchers that followed natural and non-natural disasters suggest a high rate of adverse pregnancy outcomes such as low birth weight of the newborn, preterm birth, psychological distress (Buzaglo et al. 2012, Engel et al. 2005, Wainstock et al. 2014) and clinical depression (Hermon et al. 2019, Yedid et al. 2016). Researchers have previously focused on collective experiences of traumatic events for pregnant women (Dancause et al. 2011, Nugent et al. 2011) however, there is limited knowledge related to emotional consequences for a pregnant or postpartum woman if exposed to a major disaster. Harville et al.(2009a) studied the impact of Hurricane Katrina on the psychological health of a group of women in their postpartum period. It was concluded that overall, rate of depressive disorders and post-traumatic stress disorders was not comparatively higher than that of the general public (Harville et al. 2009b). It also concluded that women who are going through pregnancy or the postpartum period are more resilient towards the mental health consequences of a natural disaster and traumatic experiences (Harville et al. 2010).

The present research aimed to examine if mindfulness mediates relationship between EMSs and postpartum depressive symptoms during the threatening time of a pandemic. The earlier proposition was supported as we found a significant negative relationship between mindfulness and the postpartum depression for women who gave birth during COVID-19 pandemic. This conclusion supports the results of Radford et al. (2014b), Paul et al. (2013b) and the theory that people who embrace non-judgmental and open attitude towards their emotions, otherwise known as mindfulness, are less likely to experience negative effects. This proposition was strengthened with the findings of a positive association between three of the early maladaptive schemas and postpartum depressive disorders. These early maladaptive schemas are over vigilance/ inhibition, impaired performance/autonomy and rejection/ disconnection. This conclusion is supported by the previous study from non-clinical (Riso et al. 2006) and clinical samples (Halvorsen et al. 2009). This conclusion seems to support the view of increased predisposition and maladaptive regulation of the negative affect among people with early maladaptive schemas (Martin et al. 2018).

Another proposition regarding the mediational relationship of mindfulness with early maladaptive schemas and postpartum depression was supported because disconnection/rejection, impaired autonomy/ performance and over vigilance/ inhibition showed significant partial mediation through mindfulness to postpartum depression. These conclusions are of specific interest as there are only two studies published in this research area, where researchers (Shorey et al. 2015, Shorey et al. 2015) examined mindfulness and early maladaptive schemas separately for males and females substance abusers. It is to be noted that we are not inferring, one schema has statistically more strong relationship with mindfulness or depressive symptomology as compared to some other schema. However, as we know that specific early maladaptive schemas through each of the five schema areas are associated with postpartum depression and mindfulness, we could conclude that future research in this area should focus on elevating all the eighteen schemas in relation to the variables, instead of focusing on only one early maladaptive schema or domain.

The relationship between mindfulness and early maladaptive schemas is consistent because the occurrence of early maladaptive schemas, promotes a diminished level of mindfulness. Consequently, individuals with a low level of mindfulness are non-judgmental and are not as likely to focus on their self-awareness. It is probably reasonable to propose that the development of early maladaptive schemas in early life sets people up to experience lower mindfulness levels by utilizing maladaptive and non-mindful forms of regulating emotions (for example: schema surrender and schema avoidance).

The relationship between early maladaptive schemas, depressive disorders and the mindfulness is further understandable because of Young et al. (2003b) narrative about early maladaptive schemas being the hurdle in treatment because of an individual's incapability to detect

and knowingly express the maladaptive perceptive and emotional content of the triggered schema. Hence, the level to which a person is conscious of a specific early maladaptive schema being triggered and the emotional consequence of activation of such schema may play a crucial role in understanding whether activation of a schema is resulting in distress and usage of maladaptive behavioral strategies or not. Consequently, for individuals who have significant clinical early maladaptive schema endorsement, mindfulness can be abstracted as an extremely protective factor which can grow the chances of being aware and ability to interrupt counterproductive thought cycles, behavior, and emotions; eventually decreasing depressive symptoms. According to Young et al.(2003c) the tag of "early maladaptive schema" shows inherited maladaptive forms of behavior, cognition and reactions to negative effects, and it is foreseeable that occurrence of early maladaptive schemas leads to lesser level of adaptive dispositional characteristic, which is actually mindfulness.

Certainly, it can be assumed that factors related with wellbeing, resilience or emotional intelligence (Elise et al. 2013, Salguero et al. 2012) can also mediate the relationship between depression and early maladaptive schemas. Nevertheless, mindfulness may be claimed as more essential in studying the influence of early maladaptive schemas on postpartum depression. An additional cause for highlighting the worth of mindfulness in this study, and potential of this study's outcomes is that it may help to include mindfulness training in therapeutic management of early maladaptive schemas. At present, the main treatment for people who endorse early maladaptive schema is the schema therapy, which concentrates on addressing systematically the lifetime and self-defeating forms of cognition about oneself and others (Boterhoven et al. 2019). Conventionally, schema therapy does not focus on mindfulness training (Baer et al. 2011). New researches (Brisbon & Lowery 2011, Carmody & Baer 2008b) suggest that mindfulness can be enhanced through clinical and non-clinical mindfulness based interventions. Therefore, putting mindfulness-based therapy into practice might play a crucial role in improving an individual's self-awareness in the moment. Hence, it is proven that maladaptive coping responses involved in worsening the symptoms of depression might be reduced through the schema-surrender and schema-avoidance.

CONCLUSION

Collectively, conclusions of the current study reinforce the view that ratification of early maladaptive schemas can be linked with lower levels of mindfulness and difficulty to normalize negative effects and later higher level of depressive indications are reported. On the other hand, it could be proposed that people who do not endorse early maladaptive schemas possibly have higher mindfulness levels and therefore, are better capable to efficiently reduce the negative effects related to depressive symptoms.

Limitations

Data was collected during lockdown. And sample size was also limited due to social distancing practices.

Conflict of interest: None to declare.

Contribution of individual authors:

Rida Fatima & Alishba Hania: concept and design, acquisition, analysis, and interpretation of data, critical revision of the manuscript for important intellectual content.
Rida Fatima: administrative, technical, or participant support.
Alishba Hania: statistical analysis, study supervision.

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