






Research Article

Role of Mindfulness between Early Maladaptive Schemas and Post-Partum Depression: a Ray of Hope

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ABSTRACT

Mothers of a newborn face a lot of physical and psychological challenges and early maladaptive schemas play a significant part in determining long-term negative consequences such as post-partum depressive symptoms. This research proposed that mindfulness could play a positive role between the early schemas and post-partum depressive symptoms among new mothers. Data was collected from a sample of 170 mothers who gave birth from February 2020 to August 2020. The young schema questionnaire-SF, Edinburgh postnatal depression scale, and the Kentucky inventory for mindfulness scale were administered. Study findings show mindfulness mediates the association between five sub-domains of maladaptive schemas namely impaired autonomy, impaired limits, disconnection, over-vigilance, other-directedness, and post-partum depression. Findings indicate that mindfulness could be a contributing factor against postpartum symptoms and play significant role in mother and infant's well-being during the challenging time of transition.

Keywords: early maladaptive schemas, mindfulness, postpartum depression

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Introduction

Buddhism proposed the fundamental idea that life is primarily defined by imperfections. Consequently, our psychological capacity to remember positive things and fight negative experiences is futile. Giving birth is a potentially stressful and critical experience and event for mothers, entailing different changes at the interpersonal and individual levels. This can cause various types of distress running in force and span (e.g., Guzzo & Hayford, 2020). Both carrying a child and giving birth can be considered traumatic and potentially stressful experiences requiring mothers to deal with several adjustments in their habits, priorities, lifestyles, self-image, and personal identity (Molgora et al., 2018). Even though most women overcome numerous challenges in the time of pregnancy and postpartum, it has additionally been seen that a proportionate number of mothers think that it is hard to recuperate from post-partum depression (e.g., Nagy et al., 2011).

Early maladaptive schemas can be explained as broad, self-perpetuating, and maladaptive life events starting from hostile social encounters with important characters in both childhood and teenage years. It was also purported that the main reason behind the development of maladaptive cognitive schemas is repeated neglect of child's universal core psychological needs (autonomy, spontaneity and play, secure attachment, realistic limits, freedom to express his needs and emotions). Maladaptive schemas are unavoidable and stable over the long run and significantly influence general information processing (Young et al., 2003). Once a schema gets activated, a person experiences disturbing negative emotions and feelings like shame, fear, and disgust. Some intrapsychic facets could be significantly activated during the process of becoming a mother, for instance, early relational experiences with significant figures in life. According to Merle-Fishman (2010), the intricate psychological process of being transformed into the role of a mother includes the re-organization of oneself. The outcome of this process and experience are influenced by the mother's early social encounters, portrayals, and re-lived memories.

Headed for the cognitive theory of depression, early schemas proposed precious addition to the idea of dysfunctional attitudes and automatic thoughts. It is known that maladaptive schemas like failure, defectiveness, and self-sacrifice were associated to the gravity of depressive symptoms in non-clinically depressed samples (Calvete & Cardeñoso, 2005). According to Colodro-Conde et al. (2018), childbirth is a stressful life event than can trigger the underlying diathesis, resulting in symptoms of depression. Moreover, the diathesis-stress model of depression purports that certain individuals are highly predisposed to depression in the context of adverse life events. The empirical outcomes proposed cognitive vulnerability as a particular diathesis for depression symptomatology (Kenny et al., 1993). Renner et al. (2012) suggested specific maladaptive schemas like emotional deprivation, instability, and failure were also related to the severity of depressive symptoms. Likewise, the disconnection domain has been related to depression prospectively and cross-sectionally (Van Vlierberghe et al., 2010).

Research results also indicate that the schema domain of impaired autonomy, disconnection, and other-directedness, is related to the level of social anxiety and depressive symptoms and the stability of depressive symptoms with time (Calvete et al., 2015). The schema of self-sacrifice and social isolation, mistrust and social isolation, and other-directedness facilitated the relation between depressive symptoms and estrangement from peers, trust in parents, and quality of attachment relationships, respectively (Roelofs et al., 2011). Depressive symptoms and impaired autonomy association had also been found in prior literature (Shih, 2006). The schema domain of other-directedness that focuses on others, such as approval, sociology, social evaluation concern, and neediness forecast depressive symptoms (Rudolph & Conley, 2005).

During the transition of motherhood, a woman's encounters with a significant change in life might be triggered accompanied by serious uneasiness, vulnerability, emotional fluctuation, and uncertainty related to parenthood. Considering postpartum depression, some studies validate a significant connection between insecure attachment style and depressive indicators (Ikeda et al., 2014). Though these findings provide empirical evidence that mothers' early

social experiences affect the adjustment level post-partum. Consequently, considering the predisposition of post-partum symptoms, this research intends to highlight a protective factor that is hypothesized to intervene between two negatively influencing variables called early maladaptive schemas and post-partum depressive symptoms. This protective factor is supposed to have the potential of becoming a ray of hope in a time of despair.

Mindfulness is characterized as a state of mind in which an individual focuses on experience in the current moment in a non-judgmental manner (Miller et al., 1995). The concept of mindfulness originated from Buddhist practice (Van Gordon et al., 2016). Prior studies have revealed that positive significant relationships exist between mental health and mindfulness (Desrosiers et al., 2013) and the positive outcomes of applying mindfulness-based techniques for mental distress (Eberth & Sedlmeier, 2012; Khoury et al., 2013). Cecero et al. (2008) studied the relationships between maladaptive schemas and mindfulness. The researcher found a negative relationship between maladaptive schemas and psychological mindfulness except for the abandonment schema (Bishop et al., 2004).

Mindfulness whether enhanced and learned through meditation intervention or dispositional, is constantly related to lower rates of depression and anxiety (Tran et al., 2014). Improved mindfulness skills are known to diminish depressive symptoms later in the prenatal period (Nyklíček et al., 2018), prevent depression relapse (Kuyken et al., 2016), and promote mother and infant well-being (Guo et al., 2020). Previous literature shows mindfulness has a negative relationship with several depressive disorders and their predictors (Carmody & Baer, 2008; Radford et al., 2014). Additionally, if mindfulness increases, the usage of maladaptive schemas would decrease (Arpaci, 2019; Hosseinzadeh et al., 2019; Martin et al., 2018; Yalcin et al., 2017). Grigorian et al. (2020) revealed that the early schemas of disconnection and over-vigilance are negatively related to acting with awareness. Furthermore, mindfulness is reported to be negatively related to impaired limits, however, describing and observing experience (sub-levels of mindfulness) are related to disconnection/rejection.

According to Janovsky et al. (2019), some sides of mindfulness may partially operate the relationship between maladaptive schemas and interpersonal difficulties. A significant relationship was observed between the mindfulness levels of females and the early maladaptive schemas except for the enmeshment, emotional deprivation, pessimism, abandonment emotional inhibition, and entitlement schemas (Shorey, Anderson, et al., 2015). On the contrary, (Shorey, Brasfield, et al., 2015) among males there is a strong negative relationship between mindfulness and early maladaptive schemas, except for entitlement, unrelenting standards, and emotional deprivation. Early maladaptive schemas can be activated when the individuals as adults are unable to enact the healthy adult mode and their mindfulness levels supposedly decrease due to triggered schemas (Thimm, 2017).

As suggested by positive psychology, constructive characteristics in a person should be emphasized rather than negative, in order to bring long-term psychological strength. Likewise, it is essential not to activate individuals' early maladaptive schemas and improve their level of mindfulness. People need understanding and empathy, instead of being criticized harshly, their self needs should be improved, as they need advice to make up for their deficiency, and decrease unrelenting standards. All these factors consequently improve mindfulness (Young et al., 2009). We hypothesized that the negative schemas and postpartum depressions are two negatively influencing factors and the disputing variable that could be enlightened as a positive ray of light in between them could be the mindfulness level of a person. This research intends to spread awareness among researchers and victims of postpartum depression that mindfulness can play an intervening role between two connecting negative factors in a time of despair.

Method

Participants

The current study involved 170 mothers who gave birth from February 2020 to August 2020. The demographic characteristics of respondents were

noted and later on converted to categorical variables to explain the sample characteristics. Respondents' age ranged from 18 years to 43 years old ($M = 25.73$; $SD = 4.94$). Some other demographic properties that were noted, were level of education (8.8% were illiterate, 5.4% were primary graduates, 41.4% were middle school graduates, 44.6% were college graduates), duration after childbirth (1 to 12 weeks passed for 49.50%, 13 to 25 weeks passed for 14.10% and 26 to 36 weeks passed for 36.90%, Duration of marriage (11 to 53 months for 40.00%, 54 to 96 months for 40.20%, 97 to 139 months for 11.40% and 140 to 180 months for 7.50%, and the type of birth (43% C-section delivery and 58% vaginal delivery).

Measures

Data was collected in person through the paper and pencil method using purposive sampling. To ensure validity, all measure items had been translated using the forward-backward method of translation.

Edinburgh Postnatal Depression scale (Naveed et al., 2015)

Edinburgh Postnatal Depression Scale (EPDS) is a renowned self-report 10-item scale. It was constructed for examining postpartum depression. Respondents were asked to answer the questions using a four-point scale that ranges from 0 to 3 (*as much as I always could to not at all*). The total score of the scale was taken by the sum of scores of 10 items (Cox et al., 1987). The composite reliability for Urdu translated scale was .86.

The Young Schema Questionnaire-Short Form (Young et al., 2003)

The Young Schema Questionnaire-Short Form (Young et al., 2003) is a 75-item self-report scale that is used to assess the severity of early maladaptive schemas, which are grouped into five domains. Each of the 15 sub-schemas consists of five items and every item is rated on a six-point Likert- scale that ranged from 1 - *completely untrue of me* to 6 - *describes me perfectly*. The sub-scales composite reliability (Over vigilance/Inhibition, Disconnection/Rejection, Impaired autonomy/Performance, Impaired Limits, Other Directedness) for the current study was .881, .876, .765, .897, and .773 respectively.

Disconnection/rejection is comprised of social isolation, mistrust, and emotional deprivation. Impaired autonomy is explained by dependence, enmeshment, or vulnerability to harm. Impaired limit is defined by entitlement and insufficient self-control. Other directedness is explained by subjugation and self-sacrifice. Lastly, over-vigilance is explained by schemas of emotional inhibition and unrelenting standards.

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

Kentucky Inventory of Mindfulness Skills is 39 items scale that measures the four components of mindfulness including acting with awareness, describing, accepting without judgment, and observing (Baer et al., 2004). The scale ranged from 1 - *never or rarely true* to 5 - *always or almost always true*. Internal consistency of scale in the current study found overall .781 and .605 to .797 across subscales.

Results

Study data analysis was carried out using SMART-PLS 3.2.8 (Ringle et al., 2015) to check the indirect effect of early maladaptive schemas on post-partum depression through mindfulness. Early maladaptive schemas domains (Impaired Limits, Impaired autonomy/Performance, Over-vigilance/Inhibition, Other Directedness, and Disconnection/ Rejection,) were considered as explanatory variables and postpartum depression was measured as the criterion variable in the path analysis. Data analysis included the measurement and structural model.

Measurement model

A measurement model was run to assess the convergent validity of the tools used for research and the evaluation was conducted through average variance extracted (AVE). The outer model was validated via a path weighing scheme as suggested by (Garson, 2012; Hair et al., 2012). The outer loading was considered to be significant with a score of .6 (Hair et al., 2011). The psychometric effectiveness was improved by excluding the items with outer loadings lesser than .6. the composite reliability was accepted with a value greater than .6. As

shown in Table 1, AVE, as well as composite reliability, appeared to be satisfactory in the measurement model.

Table 1

The measurement model test

Variables	Composite Reliability (CR)	Average Variance Extracted (AVE)
Postpartum Depression	.825	.758
Mindfulness	.811	.670
Early Maladaptive Schemas	.941	.587
Other-directedness	.800	.567
Impaired autonomy or	.764	.582
Performance		
Disconnection and rejection	.820	.543
Impaired limits	.774	.644
Over vigilance/ inhibition	.901	.544

Structural Model

Direct and indirect relationships were analyzed through bootstrapping technique (Preacher & Hayes, 2008). Dimension wise results have been presented in Figure 1 and comprehensive results are explained in Table 2.

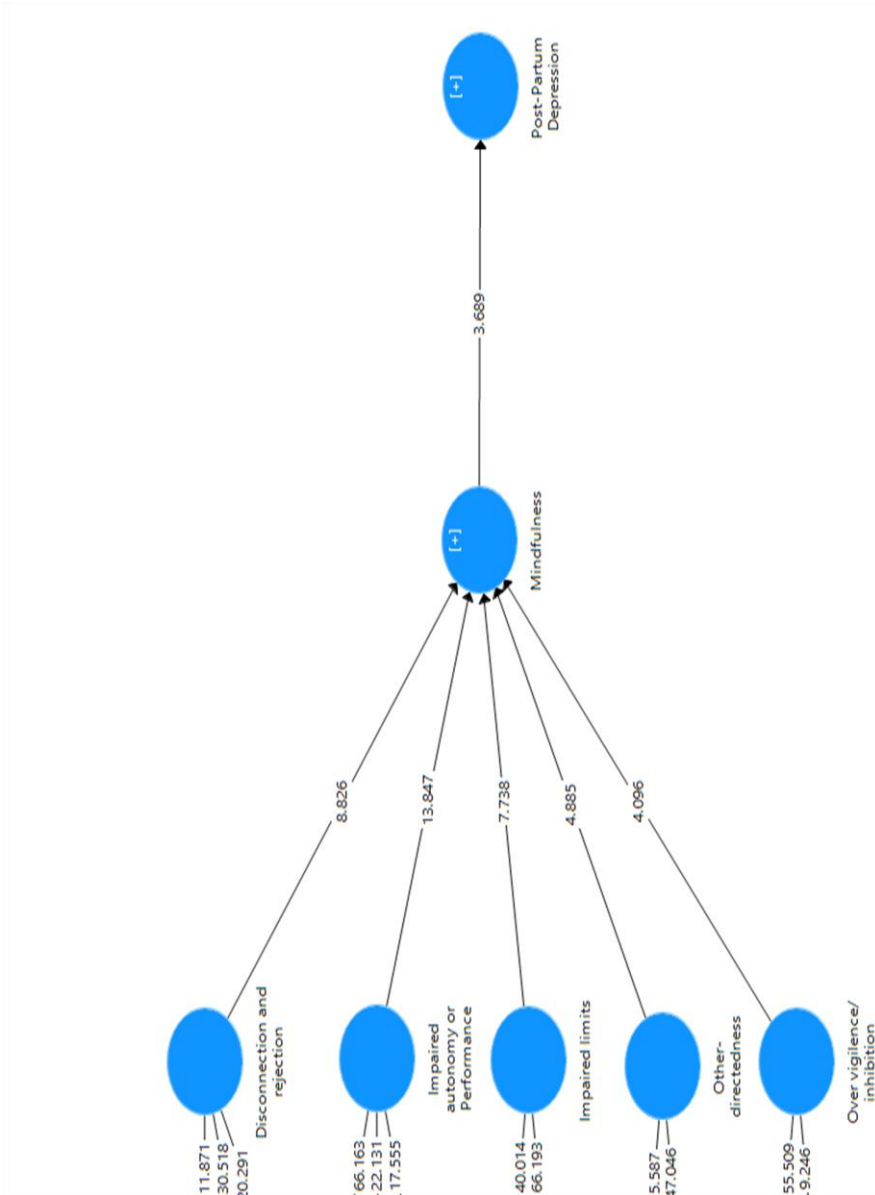


Figure 1. Specific indirect effect

Table 2

Mediation through Mindfulness on Early Maladaptive Schemas and Postpartum Depression

Variables	β	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Impaired autonomy or Performance -> Mindfulness -> Post-Partum Depression	.147	0.151	0.042	3.506	.000
Other-directedness -> Mindfulness -> Post-Partum Depression	.033	0.035	0.012	2.744	.006
Disconnection and rejection -> Mindfulness -> Post-Partum Depression	.081	0.084	0.024	3.404	.001
Impaired limits -> Mindfulness -> Post-Partum Depression	.056	0.055	0.016	3.447	.001
Over vigilance/ inhibition -> Mindfulness -> Post-Partum Depression	.032	0.033	0.013	2.526	.012

Note. β – standardized beta coefficient; *M* – Mean; *SD* – Standard deviation; *t* – t-test; *p* – p value.

Five domains of early maladaptive schemas namely (Impaired autonomy/Performance, Other Directedness, Disconnection/ Rejection, and Over-vigilance/Inhibition, and Impaired Limits,) showed significant mediation through mindfulness to postpartum depression. Thus, from these results, we can say that mindfulness mediates the relationship between early maladaptive schemas and post-partum depression.

Discussion

Nurturing an infant is significant life stress and a critical time for mothers. Some mothers encounter trouble adapting to this significant life changes (Sheinkopf et al., 2006). Though most women are resilient towards stress (Holopainen & Hakulinen, 2019), some of them face some psycho-social challenges that threaten their subjective well-being. Consequently, it can disturb daily personal and occupational functioning (Diorgu et al., 2016). This research contributes to existing research related to maternal health.

The current research focused on examining the intervening function of mindfulness between predisposed early maladaptive schemas and post-partum depression in women after giving birth. This conclusion supported prior research (Grigorian et al., 2020) that the EMSs domains of disconnection/rejection, and over-vigilance and inhibition are negatively associated with a sub-level of mindfulness called acting with awareness. Additionally, disconnection/rejection are negatively related to unfolding experiences, and observing encounters and impaired limits are associated to the other four mindfulness facets.

Current study outcomes were supported because five domains of predisposed early maladaptive schemas namely (Other Directedness, Disconnection/ Rejection, Impaired autonomy/Performance, Impaired Limits, and Over-vigilance/Inhibition,) showed significant mediation through mindfulness to post-partum depression. These findings are backed by the propositions of Shorey, Brasfield, et al. (2015) in which early maladaptive schemas and mindfulness separately for females and male substance users are studied. The association between mindfulness and predisposed early schemas is consistent because the occurrence of maladaptive schemas is intervened the level of mindfulness.

A massive body of literature suggests that self-compassion and mindfulness are key methods in appeasing depressive symptoms which might have adverse effects on both the infant and the mother (Luberto et al., 2018; Malis et al., 2017). Improved maternal mindfulness may strengthen positive experience before and after giving birth. Mindfulness may decrease adverse outcomes of unavoidable difficult events and enhance productive coping from these circumstances (Bergomi et al., 2013). Aligned with these propositions, a qualitative study outcome proves that mothers who attend an ante-natal mindfulness based childbirth training program stay more confident during childbirth and after (Fisher et al., 2012). Although, as far we know, no quantitative study investigated the impact of motherly dispositional mindfulness on subjective childbearing experience and postpartum symptoms.

Conclusion

These findings provide significance on the potential advantages of mindfulness-based practices in health advancement outreach endeavors designed for such a population. It could influence mothers' and mothers-to-be' intentions to seek mindfulness-based practices. Developing mental health facilities and intervention and compassion-based approaches that are effective in persuading and motivating mothers to explore the possible benefits from such practices as mindfulness meditation may help the mothers to develop positive attitudes that can provide lifelong mental and physical health benefits. Thus, the present study can be useful in order to enhance subjective well-being by developing mindfulness competency during pregnancy.

Limitations and Future directions

Despite the current study's contributions, few barriers exist that should be addressed. The study outcomes were derived from a small sample of mothers after childbirth from Pakistan. Future researchers should replicate the study with samples from other countries to ensure that the study findings can be generalized across samples. An experimental study can test whether mindfulness-based intervention during pregnancy help to reduce the risk of post-partum depression.

Conflict of interest

We have no conflicts of interest to disclose.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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