

## The Relationship of Mindfulness, Psychological Hardiness and Spirituality with Depression in Mothers

Zahra Ghasemi<sup>a</sup>, Mohammad Bagher Kajbaf<sup>b\*</sup>

<sup>a</sup> Faculty of Psychology and Educational Sciences, Islamic Azad University, Isfahan (Khorasgan) Branch, Isfahan, Iran.

<sup>b</sup> Faculty of Education and Psychology, University of Isfahan, Isfahan, Iran.

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#### \*Corresponding Author:

Mohammad Bagher Kajbaf

#### Email:

m.b.kaj@edu.ui.ac.ir

Tel: +98 9131130628

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### ABSTRACT

**Background:** In recent years, the incidence of depression in people, especially women, has been growing, making it essential to study psychological correlates with the disorder. Therefore, the present study was conducted to investigate the relationship of mindfulness, psychological hardiness and spirituality with depression in mothers.

**Methods:** The statistical population of this correlational study included all mothers aged 30 - 50 years in Isfahan in 2016 - 2017. To this end, 300 mothers were selected by convenience sampling. Data collection instruments were Mindfulness Skills Measures, Psychological Hardiness Questionnaire, Spirituality Questionnaire and Beck Depression Inventory. For data analysis, the descriptive statistics (mean and standard deviation) and inferential statistics (Pearson correlation coefficient and multiple regression analysis) were used.

**Results:** Mindfulness (-0.48), psychological hardiness (-0.39) and spirituality (-0.55) had a significant, inverse correlation with depression in mothers (P-value < 0.001). These components could significantly predict depression in mothers (P-value < 0.001).

**Conclusion:** Given the significant role of the subscales mindfulness, psychological hardiness and spirituality in predicting mothers' depression, it is suggested that the education of these components to mothers be taken into consideration to prevent the occurrence of depression.

**Keywords:** Mindfulness, Psychological Hardiness, Spirituality, Depression



## Introduction

Depression is one of the most commonly diagnosed psychological disorders, which is associated with a feeling of despair and hopelessness, discomfort, no motivation and hope, a decline in self-esteem, and pessimism.<sup>1</sup> Most people who are depressed are always sad, and do not enjoy the activities that they previously enjoyed or experience a combination of these two conditions.<sup>2</sup> For diagnosis of depression, according to the fifth edition of the Diagnostic and Statistical Manual of Psychiatric Disorders, the fifth revised edition), five or more signs should last most of the day, almost every day for at least two consecutive weeks, and cause significant clinical impairment in social, occupational, and other important functional areas. Diagnostic and statistical manual of mental disorders fifth revised edition.<sup>3</sup> Studies have shown the overall prevalence of major depressive disorder (MDD) is 3 - 6%, and is twice in women than that in men; the lifetime prevalence of this disorder is 15 - 25%. As expected, over 150 million people across the world are currently suffering from the disorder.<sup>4</sup> In the past, it was thought that depression is a short-term problem, but now it is considered a disease with a high relapse rate in many patients. In a person with phase 1 MDD, there is a 50% probability of occurrence of the phase 2 MDD, but after the phase 2, the likelihood of occurrence of subsequent phases increases by 80 - 90%.<sup>5</sup>

Mindfulness is one of the factors influencing psychological processes in people with depression.<sup>6-8</sup> Mindfulness refers to aroused attention and awareness of what is happening at the present moment.<sup>9</sup> This attention is a purposeful consideration, along with an unjudged acceptance of the experiences that are taking place at the present moment.<sup>10</sup> Several researches have shown the role of mindfulness in various psychological disorders.

For example, Siegel (2009) has shown that mindfulness can lead to a reduction in various psychological problems, such as sadness, depression, insomnia, sexual problems and chronic pain.<sup>11</sup> Howell et al. (2008) reported that

mindfulness could increase mental health of individuals.<sup>12</sup> Besides that, the study of Weinstein et al. (2009) showed that individuals with higher mindfulness more frequently assessed stress in a logical manner and less frequently used avoidance coping strategies.<sup>13</sup>

Another component that can play a moderating role in causing psychological damage is psychological hardiness.<sup>14-16</sup> Psychological hardiness modifies the way to cope with stressors and helps individuals to transform stressful conditions from potentially harmful situations to opportunities to promote function, leadership, affairs, health, and psychological development.<sup>17</sup> Hardiness, as a personality trait, represents the peerless and active understanding of one's relationship with others and consists of three components, namely, challenge, control, and commitment.<sup>18</sup> As a personality trait, hardiness has also been defined as a factor to prevent the adverse effects of stress on health. This trait, as a combination of thinking, emotions and behavior, helps individuals move toward a dynamic life and enrich their lives. Hardy people are highly curious and tend to think about their life as an interesting phenomenon and to make it meaningful.<sup>19</sup>

Spirituality is one of the components that have long been considered by the researchers and are thought to play a prominent role in preventing psychological damage.<sup>20</sup> Spirituality is a reflection of the human desire to achieve a transcendental existence or power beyond his /her control and understanding, which manifests his/her, unique cognitive existence against animals.

Spirituality is also an abstract aspect of human life that comprises a part of his/her secular or religious nature.<sup>21</sup> Spirituality plays a dual role in the psychological system of individuals; on the one hand, it is a source of excitement, and on the other hand, it regulates emotions because of creating a semantic system.<sup>22</sup> Spirituality refers to beliefs and actions that serve this hypothesis that there are transcendental (not physical) dimensions in human life that put him in close connection with God and



set up a range of virtues in him. Individuals in taking a spirituality-based action, seek to draw a meaningful process for life using their existential capacities, tendencies, spiritual motives and moral virtues that can entail behavioral, cognitive, emotional, metacognitive and emotional aspects.<sup>23</sup> Various researches have shown that spirituality helps individuals cope with stress.<sup>24</sup>

Given the prominent role of mothers in the healthy life process and their unique roles in mental health of family members, especially children, as well as the negative impact of depression on the present and future lives of individuals, as well as the important role of the outcomes of this disorder in preventing its occurrence, as well as the lack of research on the relationship of mindfulness, psychological hardiness and spirituality with depression in mothers, this study will investigate the relationship between these components in mothers. Therefore, the main purpose of the present study is to investigate whether mindfulness, psychological hardiness and spirituality are related to depression in mothers.

### Methods

The aim of this correlational study was to investigate the relationship of mindfulness, psychological hardiness and spirituality with depression in mothers. All mothers aged 30 to 50 years old in Isfahan in 2016 - 2017 comprised the study population from which samples were selected by convenience sampling. Since Houtman (2006) has suggested that the minimum sample size for the desirable analysis of data and the fulfillment of external validity in descriptive-correlational studies is 250, then we asked 300 women aged 30 to 50 years living in Isfahan to participate in the study after the study objectives were explained to them. The sampling was conducted in places like hospitals, parents and teachers meetings and counseling centers across the city of Isfahan. In this study, mindfulness, psychological hardiness and spirituality were considered predictor variables and depression

regarded as criterion variable. The inclusion criteria were being 30 - 50 years old and having at least one child, having ability to read and write to answer research questions, and providing consent to participate in the study.

Exclusion criteria were lack of cooperation and failure to perform specified assignments, incompletely or inappropriately filling out the questionnaire, and withdrawing from the study.

### Kentucky Inventory of Mindfulness Skills (KIMS)

The KIMS was developed by Baer, Smith and Allen in 2004. The inventory consists of 39 items and four subscales namely observing (items 1, 5, 9, 13, 17, 21, 25, 29, 30, 33, 37, 39), describing (items 2, 6, 10, 14, 18, 22, 26, 34), act with awareness (items 3, 7, 11, 15, 19, 23, 27, 31, 35, 38) and accept without judgment (items 4, 8, 12, 16, 20, 24, 28, 32, 36). The items are scored on a five-point Likert scale from very rarely to most of the time (1 - 5), and the minimum and maximum possible scores on the inventory are 39 and 195, respectively. The higher the score on the inventory, the higher the level of mindfulness.<sup>25</sup>

The results of Baer et al. psychometric analysis (2006) showed that the KIMS had a high internal consistency (0.73), and the Cronbach's alpha coefficients of the subscales observing, describing, act with awareness, and accept without judgment were calculated at 0.91, 0.84, 0.83 and 0.87, with test-retest reliability coefficients of 0.65, 0.81, 0.86 and 0.83, respectively.<sup>26</sup> Besides that, a significant correlation has been reported between the KIMS and other instruments, such as Mindfulness Scales,<sup>27</sup> Freiburg Mindfulness Inventory (FMI),<sup>28</sup> Cognitive and Emotional Mindfulness Scale of Mindfulness,<sup>29</sup> and the Mindfulness Questionnaire.<sup>30</sup> Dehghan Manshadi et al. (2012) examined the psychometric properties of the KIMS in Iran. That study showed the Cronbach's alpha of the inventory was 0.82, and the factor analysis indicated it consisted of four factors, namely, observing, describing, act with awareness, and accept without judgment, which explained 42.26%



of the variance in the total scores achieved from the inventory. The convergent validity of the KIMS subscales have been obtained 0.47 - 0.78.<sup>31</sup> The reliability of the whole inventory and the subscales observing, describing, act with awareness, and accept without judgment in the present study were calculated at 0.85, 0.90, 0.88, 0.85 and 0.85, respectively, using the Cronbach's alpha coefficient

### **Kobasa Hardiness Questionnaire**

Kobasa Personal Outlook Evaluation Questionnaire is used to measure hardiness. The questionnaire was developed by Kobasa (1989) and consists of 50 items. The items are scored on a Likert scale between zero (absolutely incorrect) and 3 (absolutely correct). Therefore, the scores on the questionnaire range from 0 to 150. The questionnaire consists of three subscales struggling (items 2, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 37, 40, 43, 46, and 49), commitment (items 1, 8, 11, 14, 17, 20, 23, 26, 29, 32, 3, 39, 41, 44, 47, and 50), and control (items 3, 4, 5, 7, 10, 13, 16, 19, 22, 25, 28, 31, 34, 35, 42, 45, and 48). Items 27, 26, 25, 24, 23, 22, 5, 4, 3, 2, 1 are scored inversely and the rest of the items are scored directly<sup>17</sup>. This questionnaire was translated by Ghorbani in 1992, and the face and content validity of its subscales, i.e., commitment, control, and struggling, as well as their reliability coefficients (0.70, 0.74 and 0.69, respectively) were reported, with the reliability coefficient of 0.75 for the whole questionnaire. In addition, Kravetz et al. (1993) reported an acceptable internal consistency for the questionnaire, and also calculated the Cronbach's alpha coefficients for its subscales at approximately 0.70.<sup>33</sup> Maddi and Khoshaba (1994) have also investigated the validity of this questionnaire.<sup>34</sup> The reliability of the subscales commitment, control and struggling, and the whole questionnaire in the current study were calculated at 0.75, 0.70 0.69, and 0.72 respectively, using the Cronbach's alpha coefficient.

### **The Spiritual Assessment Inventory (SAI)**

The SAI (Hall and Edwards, 1996) was developed to assess the two dimensions of spiritual maturity: awareness of the existence of God and

the quality of relationship with God. The initial version of the inventory had five subscales awareness, realistic acceptance, disappointment, grandiosity, and instability. Hall and Edwards (2002) revised the scale and added the subscale health management to it, so the current version has six subscales.<sup>35</sup> The SAI is a self-report scale with 47 terms, some of which are composed of two sections. The respondent is expected to express his degree of agreement or disagreement with each of the items using a Likert scale.<sup>36</sup> Hall and Edwards (1996) reported the Cronbach's alpha coefficient for the subscales awareness, realistic acceptance, disappointment, grandiosity, instability, and health management to be 0.95, 0.90, 0.83, 0.73, 0.84 and 0.77, respectively.<sup>35</sup> After assessing the construct validity of the SAI, Hall and Edwards (2002) obtained an acceptable correlation between the inventory and Bell's Bell Object Relations Inventory,<sup>37</sup> Spiritual Well-being Questionnaire,<sup>38</sup> Internal/External Representation Questionnaire,<sup>39</sup> Narcissistic Personality Inventory<sup>40</sup> and Defense Styles Questionnaire.<sup>41</sup> These results represent the acceptable construct validity of the SAI.<sup>35</sup> The reliability of the whole SAI and the subscales awareness, realistic acceptance, disappointment, grandiosity, and health management were calculated at 0.83, 0.89, 0.89, 0.89, and 0.86, respectively.

### **Beck Depression Inventory**

The Beck Depression Inventory contains 21 items, each of which measures one dimension of depression. The items are rated on a 4-point Likert scale (0 - 3). The minimum and maximum attainable scores on the inventory are 0 and 63, respectively. By summing scores on all items, the score of the respondent can be easily obtained. Scores on this scale are categorized as follows: 0-13 (no or least depression), 14 - 19 (mild depression), 20 - 28 (moderate depression), and 29 - 63 (severe depression).<sup>42</sup> Reliability and validity of the inventory have been frequently evaluated since its development until now, and the reported results have been mainly acceptable. In various



studies, the validity ( $r$ ) of this test has been obtained as 0.73 – 0.93 with an average of 0.86. The concurrent validity correlation coefficient ( $r$ ) with clinical grading for psychiatric patients was obtained as 0.55 - 0.96. The Beck Depression Inventory also has a high correlation with other depression scales. For example, the correlation coefficient ( $r$ ) of this instrument with the Minnesota Multiphasic Personality Inventory was obtained 0.74.<sup>43</sup> The reliability of the inventory in the current was calculated at 0.84 using Cronbach's alpha coefficient. To observe research ethics, the consent of individuals to participate in the intervention was obtained and they were given information on all stages of the study. The participants were also assured that their information would remain confidential and that they would remain anonymous. Data analysis was done by SPSS<sub>23</sub> in two sections (descriptive and inferential statistics) using descriptive statistics, Pearson correlation coefficient and multiple regression analysis. First, the relationship of mindfulness, psychological hardiness and spirituality with depression was investigated by Pearson correlation coefficient, and then the contribution of each variable to predicting depression was evaluated by multiple regressions.

## Results

In total, 20% of the women were 30 - 35 years, 37% 36 - 40, and 24% 41 - 45, and 19% 45 - 50. In addition, 16.67% ( $n$ : 50) had high school diploma and lower education level, 22.66% ( $n$ : 68) associate degree, 41.66% (125) bachelor's degree, 18.33% ( $n$ : 55) master's degree; 0.66% ( $n$ : 2) had PhD or were PhD students.

Before the calculation of Pearson correlation coefficients, the presumptions of parametric tests were investigated by Kolmogorov-Smirnov test, and the results showed the data were normally distributed ( $P$ -value  $<$  0.05). In addition, the homogeneity of variance was also investigated by Levene's test, and the results indicated the statistic was not statistically significant, reflecting the

existence of homogeneity of variances ( $P$ -value  $<$  0.05). Now, the inferential tables will be presented.

According to the matrix of Pearson correlation coefficients in Table 2, the subscales mindfulness (-0.48), psychological hardiness (-0.39) and spirituality (-0.55) were inversely correlated with depression in mothers ( $P$ -value  $<$  0.001). Now, after ensuring the existence of correlation between the subscales, the regression tables will be examined to determine the contribution of each predictor variable (mindfulness, psychological hardiness and spirituality) to predicting the criterion variable (mothers' depression).

Based on the results of the above table, the  $F$  value of the regression model is significant. Therefore, predictor variables (mindfulness, psychological hardiness and spirituality) could significantly predict the criterion variable (mothers' depression). The model's explanation coefficient also showed that predictor variables (mindfulness, psychological hardiness, and spirituality) could explain 49% of variance in depression in mothers.

First, it is necessary to note that the study of the collinearity of predictor variables by the tolerance value indicated that 92% of variance in mindfulness was not explained by the psychological hardiness and spirituality subscales, 93% of variance in psychological hardiness was not explained by the mindfulness and spirituality subscales, and 94% of the variance in spirituality was not explained by the mindfulness and psychological hardiness subscales. This indicates a low correlation between the predictor variables, which provides the basis for use of regression analysis. The regression coefficients of all three subscales mindfulness, psychological hardiness and spirituality were drawn statistically significant (Table 4). As a result, a one-point increase in the subscale mindfulness, if the subscales psychological hardiness and spirituality are assumed fixed, would result in an average decrease of 0.28 in the standard deviation of mothers' depression scores. In addition, a one-point increase in the subscale psychological hardiness, if the



subscales mindfulness and spirituality are assumed fixed, would result in an average decrease of 0.19 in the standard deviation of mothers' depression scores. Finally, a one-point increase in the subscale spirituality, if the subscales mindfulness and psychological hardiness are assumed fixed, would result in an average decrease of 0.52 in the standard deviation of mothers' depression scores.

The current study, as any other studies, suffered from certain limitations such as lack of precise control to match the participants regarding the family demographic characteristics, which may

have influenced and therefore challenged the results. This study was conducted on the mothers in Isfahan, and therefore generalization of the results to other cities should be done with caution due to the differences in different subcultures. The measurement instruments may also influence the generalizability of the results, and it is suggested to use more inclusive measurement instruments along with clinical interview in future studies. The present study also had a methodological limitation as it is difficult to make causal inference in correlational studies.

**Table 1.** Descriptive results on studied variables

Subscale	Mean	SD	Min	Max	Acceptable Range
Psychological hardiness	83.126	2.20	70	174	۱۱۰ - ۱۳۰
Spirituality	1.83	11.17	36	129	۷۰ - ۹۰
Mindfulness	28.175	5.24	93	224	۱۳۰ - ۱۵۵
	65.18	54.10	6	46	۱۹ - ۲۲

**Table 2.** Pearson Correlation Coefficient between Mindfulness, Psychological Hardiness and Spirituality with Depression in Mothers

Variables	Mindfulness	Psychological hardiness	Spirituality	
Depression	Pearson correlation coefficient Significance value	-0.48** 0.0001	-0.39** (, , , , , )	-0.55** (, , , , , )

**Table 3.** Summary of analysis of variance of regression model on mothers' depression scores based on the subscales mindfulness, psychological hardiness and spirituality

Source of variances	Total sum of squares	df	Mean square	F	Significance level	Multiple correlation coefficient	Explanation coefficient
Regression	2421.33	3	807.11	29.47	0.0001	0.70	0.49
Remaining	8131.86	297	27.38				
Total	10553.19	299					

**Table 4.** Regression coefficients of mothers' depression scores based on mindfulness, psychological hardiness and spirituality

Predictor variables	Unstandardized coefficient	(Std. Error)	Standardized coefficient	t value	P-value	Collinearity Tolerance value
Mindfulness	-۰,۲۵	0.07	-۰,۲۸	-۳,۶۶	0.0001	0.92
Psychological hardiness	-۰,۱۴	0.06	-۰,۱۹	-۲,۵۵	0.1	0.93
Spirituality	-۰,۳۴	0.05	-۰,۵۲	-۶,۷۶	0.0001	0.94



## Discussion

The purpose of this study was to investigate the relationship of mindfulness, psychological hardiness and spirituality with depression in mothers. The results of data analysis showed that the subscales mindfulness, psychological hardiness and spirituality had a significant, inverse correlation with depression in mothers (P-value < 0.001). The findings also showed that these components could significantly predict the depression in mothers (P-value < 0.001). This current study is in agreement with other studies in this field, as the study of Siegel (2010) showed that having mindfulness could significantly reduce sadness, depression, insomnia, sexual problems and chronic pain. Howell et al. (2008) reported that mindfulness could affect a harmful psychological component such as depression by increasing mental health.<sup>12</sup>

Weinstein et al. (2009) have shown that individuals with high levels of mindfulness are able to reasonably analyze stressful conditions and less frequently use avoidance coping strategies.<sup>13</sup>

In explaining the significant role of mindfulness in predicting mothers' depression, it can be argued that mindfulness increases psychological flexibility, and offers new alternatives to him/her at the moment that one feels he/she can no longer do anything. Mindfulness helps one to establish a new relationship with all internal and external resources for learning and recovery, which even he/she may think to be deprived of.<sup>5</sup>

Mindfulness can lead to behavioral patterns that entail less disturbing thoughts and emotions, e.g., depression.<sup>44</sup> It has also been found that mindfulness can reduce cortisol levels.<sup>45</sup> Other studies have shown that these physiological effects increase acceptance and reduce the likelihood of developing psychological disorders in the individual. Some evidence suggests that mindfulness can have a relationship with structural changes in certain regions of the brain that deal with sensory, cognitive and emotional processing, which also reduces negative emotions by labeling negative emotional stimuli.<sup>46</sup> To explain the

significant relationship between psychological hardiness and depression, it can be argued that psychological hardiness leads to psychological flexibility in individuals.<sup>47</sup> Besides that, the psychological flexibility model has shown that mental and physical health problems can be partly due to attempts to control hidden negative experiences.<sup>48</sup> Psychological flexibility refers to the ability to establish open and direct contact with experiences at the present moment, and to insist on or change behavior according to what individual position, values, and goals are required.<sup>49</sup> Hayes et al. (2006) and Bond et al. (2008) have argued that psychological flexibility can lead to effective actions to adapt to personal values in the presence of intervening emotions, thoughts and physical sentiments.<sup>49, 50</sup> In coping with physical and psychological problems, psychological hardiness can lead to the individual's quest for suppressing unwanted thoughts and avoiding undesirable feelings or emotions, distraction immediately after the current experience or attempt to change the current psychological state, especially when these responses interfere with the attainment of goals and the pursuit of long-term values.<sup>51</sup> It should also be noted that individuals who have psychological hardiness, perceive life changes as positive and challenging, and seek to make certain changes to different aspects of their lives. These people are more likely to seek new, fresh and intense stimulations, and are more prepared for risk taking, and thus have higher levels of excitement and lower depression.

The findings of the present study regarding significant relationship between spirituality and depression are consistent with the results of Ghobari Bonab et al. (2009) and Springer et al. (2003).<sup>52, 53</sup> Taken together, it can be argued that spirituality is a dimension of man that reflects his/her relationship and integrity with the universe. Relationship and integrity offer humans hope and meaning, transcend them from the limits of time, place, and material interests, and considerably prevent development of psychological damage in them.<sup>54</sup>



Religion and spirituality provide a set of words and frameworks through which human beings can understand the meaning of their lives. Spirituality is expressed and shaped by accepted acts and beliefs of any given culture. This approach refers to spirituality in its original meaning. Spiritual needs in the realm of official religion are deeply and inherently associated with the belief in God or other divinities.<sup>22</sup> It seems that the spiritual needs have both an internal value and meaning and an external value and meaning.

### Conclusion

Spirituality provides the person with mental and insightful approaches, such as knowledge promotion, belief in God, patience, asceticism, faith, gradual growth of divine insight, prayer, and the restoration of divine nature, to bring mental relaxation for him/her. Meanwhile, the role of orientation and functional strategies, the reduction of worldly belongings, the teachings on normal behavior, repentance, the reduction of the regret for the past, the strengthening of the will to leave the sin, etc., also demonstrate the effectiveness of religion and spirituality on mental health and depression. Mental peace, relaxation, and comfort caused by the spiritual and religious considerations are due to the individual's conscious and sincere interest in them.

### Conflicts of Interest

In this study, was not reported any potential conflicts of interest with the authors.

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### Authors' Contribution

Conceptualization, M.B.K. and Z.Gh.; Methodology, Z.Gh.; Formal Analysis, M.B.K., Investigation, Z.Gh.; Data Curation, Z.Gh.,

Writing – Original Draft, Z.Gh. and M.B.K.; Writing –Review and Editing, M.B.K; Resources, Z.Gh. and M.B.K.; Supervision, Z.Gh.

All authors read and approved the final manuscript and are responsible about any question related to article.

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