

The Role of Cognitive Fusion and Mindfulness Components in the Prediction of Students' Depression

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Abstract

The aim of the present study was to investigate the role of cognitive fusion and mindfulness components in the prediction of a student's depression. This research was a descriptive-correlational study. The statistical population consisted of the students of Lorestan Universities in 2019. Among them, 340 students were selected through multistage cluster sampling. The data collecting tools included the Beck Depression Inventory, Cognitive Fusion Questionnaire and the Five Facet Mindfulness Questionnaire. For data analysis, statistical methods such as the Pearson correlation and stepwise regression were used. The results of the study indicated that the components of cognitive fusion had a significant and positive relation with the depression; while the components of mindfulness had a significant and negative relation with depression. Also, the results of regression analysis showed that observation, acting with awareness, non-judging of inner experience, fusion and diffusion were predictors of depression, respectively.

Keywords: Cognitive fusion, depression, mindfulness, students

Introduction

Cognitive fusion is one of the processes involved in depression (Stirman, et al, 2017). While the involvement of the individual in the intellectual tissue has led to the formation of cognitive fusion (Bardeen and Fergus, 2016), acceptance of internal events reduces cognitive fusion (Hayes, 2004). On the other hand, information processing errors that occur in cognitive fusion play a role in turning cognition into a source of concern. These worries can lead to depression in the future (Stirman, et al, 2017). In this regard, Cookson, et al, (2019) showed that there is a significant relationship between cognitive fusion and experimental avoidance with depression.

Mindfulness has been studied in recent studies due to its association with mental health (Shambhu et al., 2018). The more one pays attention to the current events of life, the more mindfulness he is, and the more responsive he is to events, calmer he is (Nigol and Di Benedetto, 2020). While people with low mindfulness have less perception of emotions and are less likely to accept negative emotions (Shallcross and Spruill, 2018), people with high mindfulness, instead of avoiding or rejecting negative emotions, observe and accept these emotions along with unpleasant experiences (Cheung and Ng, 2019). In this regard, Parmentier, et al, (2019) reported that mindfulness is directly and indirectly associated with low levels of depression and anxiety.

Considering the importance of mindfulness and cognitive fusion as effective variables in the improvement and prevention of mental disorders, the researcher in the present study decided to investigate the role of cognitive fusion and mindfulness components in predicting students'

depression. Accordingly, in this study, it is assumed that there is a positive relationship between the components of cognitive fusion and depression and a negative relationship between the components of mindfulness and depression.

Method

The present study was a correlational descriptive study performed on 380 students from Lorestan universities, who were selected by multi-stage cluster sampling. According to the Cochran's formula, 322 people had to be selected as the sample. Considering the possibility of participants' loss, the sample size was 380 people, and after collecting the questionnaires, 340 people entered the final analysis. Pearson correlation and stepwise regression were used to analyze the collected data. The research tools were:

Beck Depression Inventory-2 (BDI-II): This 21-item questionnaire is one of the most widely used questionnaires to measure depression. Beck, et al, (1996) obtained two cognitive-emotional and physical factors for this questionnaire using exploratory factor analysis. They also reported the internal consistency of the questionnaire ranging from 0.89 to 0.94.

Cognitive fusion scale (CFS): To measure the components of cognitive fusion, the 12-item questionnaire of Gillanders, et al, (2014) was used, which had two factors of fusion and diffusion. Gillanders, et al, (2014) used the commitment and acceptance questionnaire as differential validity and obtained the correlation coefficient -0.72 for this tool. They also reported Cronbach's alpha of 0.93 and a retest coefficient of 0.80.

Five-Factor Mindfulness Questionnaire (FFMQ): this 39-item questionnaire was designed by Baer, et al, (2006) and is scored on a five-point Likert scale. Using exploratory factor analysis, Baer, et al, (2006) obtained five factors of observation, acting with awareness, non-judging of inner experience, describing and non-reactivity. They also reported Cronbach's alpha of the factors and the total questionnaire between 0.75 and 0.91.

Results

In the present study, 340 students (186 females and 154 males) were present from Lorestan universities. The mean and standard deviation of age of participants were 21.32 and 2.15, respectively. Also, according to the collected data, almost half of the students suffered from severe depression.

Based on the correlation matrix between the components of cognitive fusion and mindfulness with depression, it became clear that the components of cognitive fusion had a significant positive relationship with depression and the components of mindfulness had a significant negative relationship with depression. Among the predictor variables, fusion ($r = 0.31$) and action with consciousness ($r = -0.27$) had the highest significant relationship with depression. On the other hand, observation ($r = -0.19$) and diffusion ($r = 0.21$) had the least significant relationship with depression.

Stepwise regression was used to evaluate the potential of cognitive fusion and mindfulness components in predicting depression (Table 1). The results showed that observation, acting with awareness, non-judging, fusion and diffusion were able to predict depression, respectively ($P < 0.001$, $F = 11.24$). Also, according to Table 1, it can be seen that among the

predictor variables, observation with a beta value equal to -0.28 was the strongest predictor variable that negatively predicted depression. In addition, among other predictor variables, acting with awareness, non-judging, fusion and diffusion were able to predict depression with beta values of -0.23, -0.17, 0.15 and 0.14, respectively.

Table 1: Regression analysis of cognitive fusion components and mindfulness components to predict depression

Predictor variables	B	SE	β	T	Sig	Tolerance
observation	-0.29	0.03	-0.28	-4.14	0.001	0.95
acting with awareness	-0.27	0.04	-0.23	-3.63	0.001	0.95
non-judging	-0.18	0.03	-0.17	-3.21	0.031	0.91
describing	-0.11	0.03	-0.10	-1.14	0.118	0.82
non-reactivity	-0.10	0.04	-0.10	-1.18	0.171	0.87
fusion	0.17	0.05	0.15	2.48	0.002	0.89
diffusion	0.15	0.04	0.14	2.21	0.046	0.90

Discussion and Conclusion

According to the research findings, the components of mindfulness and cognitive fusion are significantly associated with depression. People with high levels of mindfulness accept the most painful emotions, pay attention to experiences while they accept it, are non-judgmental (Cladder-Micus et al., 2018), and are observant to depression and do not engage in it (Freudenthaler, et al, 2017). On the other hand, the higher the degree of fusion in people, the less control and mastery of the living environment, the lower the sense of self-efficacy and psychological well-being, which will cause people who lack cognitive and behavioral skills in controlling stressful environmental events to doubt their ability and leads to depression.

The type of research (correlation) and the use of questionnaires have led to limitations in the research. Therefore, it is suggested to conduct research using a longitudinal plan and other tools, including interviews. In addition, it is recommended to consider mindfulness prevention training and cognitive fusion management with the aim of reducing negative emotions such as depression.

Financial support

The present study was not financially supported.

Acknowledgement

We would like to thank the students who participated in completing the research questionnaires.

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