



Causal relationship between integrative self-knowledge and basic psychological needs with psychological well-being: considering the mediating role of mindfulness in students

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Background and Aim: appropriate educational facilities, along with the active and motivated minds of learners, will lead to the progress of the country; Therefore, one of the important research priorities in this field is to identify and investigate the effective factors in the mental health of students, which are considered the main components of the educational system. Therefore, the present study was conducted with the aim of investigating the causal relationship between integrative self-awareness and basic psychological needs with psychological well-being with regard to the mediating role of mindfulness in middle school students of Tehran. **Method:** This descriptive correlational study was conducted on a sample of 352 people, who were selected by multi-stage cluster sampling method from among all secondary school students of the 2nd district of Tehran in the academic year of 2019-2020. Ghorbani et al.'s (2008), basic psychological needs of LaGuardia et al.'s (2000), Rief's psychological well-being (1989) and Freiburg's mindfulness (2006) questionnaires were implemented and the data were collected using descriptive statistics, Pearson correlation and structural equation modeling methods in $P > 0.01$ significance level was analyzed by AMOS software and SPSS version 24. **Results:** The structural model of predicting psychological well-being based on basic psychological needs and self-knowledge, with the mediation of mindfulness in students, had an acceptable and favorable fit ($P < 0.01$); Therefore, it can be concluded that the satisfaction of basic psychological needs and self-knowledge of coherence with the mediation of mindfulness explains psychological well-being in middle school students. **Conclusion:** Considering the positive and meaningful relationship of psychological well-being with basic psychological needs and integrative self-knowledge and confirming the mediating role of mindfulness in this process and the importance of psychological well-being in nurturing and improving the academic performance of students, paying attention to the level of mindfulness and satisfying the basic psychological needs of students in schools It is very important and it is recommended that schools organize programs in their work program to improve the level of self-awareness of students and to familiarize and apply more concepts such as mindfulness, and to plan educational environments in a way that can meet the basic needs of students.



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Introduction

In recent years, in the field of mental health, the concept of psychological well-being has been proposed as a new construct and one of the most important indicators of the attention of researchers interested in the quality of life, which has a significant impact on student's attitudes and academic progress (Tomba, Tecuta, Schumann, & Ballardini, 2017) and in students who are in the sensitive period of adolescence and the stage of identity formation, it becomes doubly important (Velizadeh, 2018). Psychological well-being is one of the noteworthy constructs in the field of positive psychology, which was first proposed by Ryff (1989) and met with wide acceptance (Cheng & Chan, 2005) and later became relatively more stable (Reif & Singer, 1998). Mindfulness is one of the most important variables affecting psychological well-being (Priestman, 2008). Mindfulness means paying attention to the present in a specific, purposeful, and non-judgmental way (Kabat-Zinn, 2003). Mindfulness makes people less likely to give real meaning to their thoughts and feelings and learn to observe personal reactions to psychological distress and progress toward life values (Coyle, 2013). Mindfulness can play a useful role in improving various aspects of people's lives, especially learning and academic performance. It can also significantly increase deeper awareness of feelings and thoughts, reduce procrastination and academic stress, increase homework follow-up, and improve health (Qadampour et al., 2018). One of the other important variables related to psychological well-being is integrative self-knowledge. Integrative self-awareness refers to one's efforts to integrate oneself in the past, present, and future and involves paying attention to experiences that are experienced in the present. In fact, integrative self-awareness is learning from past experiences and is related to positive outcomes such as efficient coping and psychological well-being in students (Ghorbani & Watson, 2008; Imani et al., 2016). Integrative self-knowledge has two main dimensions. Experiential self-awareness, which focuses on moment-to-moment attention, and reflective self-awareness, which analyzes one's own experience through cognitive functions, is more complex and regular, and focus on comparing the present moment with internal performance standards based on one's experience in the past and the desired future (Ghorbani & Watson, 2004). Self-

determination theory (SDT) is one of the relatively new theories in the field of self-regulation. It places the satisfaction of basic needs at the top and pays special attention to it. This theory was presented by Deci and Ryan (1985), who acknowledge that humans are motivated either by intrinsic or extrinsic motivation. Intrinsic motivation refers to acting due to internal pleasure or interest, and extrinsic motivation refers to acting due to external consequences. According to this view, intrinsic motivation is created after satisfying three basic psychological needs: autonomy, competence, and connection with others (Desi Vrayan, 2000). Studies show that the satisfaction of basic psychological needs is associated with improving health status (Filak & Nicolini, 2018). In the research of Dehaan, Hirai, and Rayan (2016), it has been shown that by satisfying basic psychological needs, positive consequences such as a feeling of relaxation, anxiety reduction, self-restraint, performance improvement, and behavioral stability are achieved.

Based on theoretical foundations and according to the review of existing studies, it has been shown that mindfulness is related to psychological well-being, integrative self-knowledge, and satisfaction of basic psychological needs in students (Wang & Kong, 2014; Abedi et al., 2017; Imani et al., 2016; Ariani et al., 2017). However, the relationship between psychological variables is not a simple one-to-one relationship; instead, the factors interact with each other and have different effects. Considering the importance of these variables and meaningful relationships between them, and the lack of research that structurally examines these effective factors, and on the other hand, the importance of students' mental health, the present study intends to examine the relationships between these variables and a model for how to influence them. They are presented separately. Therefore, the main questions of this study are: 1) Can integrative self-knowledge and basic psychological needs predict psychological well-being in students? 2) Can mindfulness play a mediating role in the relationship between mindfulness and these variables?

Method

The current research is descriptive and predictive correlation type. The statistical population of the present study was made up of all the students of

the second secondary level in the 2nd district of Tehran, who were studying in high schools in Tehran in the academic year 2019-2020, and who were not allowed to be permanently present in educational environments due to the coronavirus. Among the target population, 352 people were selected by the multi-stage cluster sampling method, and study materials were designed online.

Tools

1. Ryff's Psychological Well-being Inventory.

This scale was designed by Ryff (1989) and was revised in 2002. The short form of 54 spheres is derived from 120 spheres, which measures six factors independence of action, control over the environment, personal growth, positive relationship with others, purposeful life, and self-acceptance. Participants respond to the items based on a 6-point Likert scale from completely disagree (1) to completely agree (6). The total score of these six factors is calculated as the overall psychological well-being score. Eight items are scored in reverse. Ryff and Singer (2006) reported the correlation of this scale with the scale of 84 spheres from 0.79 to 0.89; In the research of Akhbarati and Bashardoost (2015), the validity of content, form, and criterion of this questionnaire has been evaluated. In the current study, the reliability of the questionnaire was estimated to be above 0.7 through Cronbach's alpha.

2. Basic Psychological Needs Scale La Guardia et al. (2000).

La Guardia et al. created this scale in 2000 that measures the feeling of support for the needs of autonomy, competence, and connection with others. The scale includes 21 items, graded on a seven-point Likert scale. In the research of van den Bruke et al. (2010), the alpha coefficient of this questionnaire was obtained for the competency dimension of 0.88, the autonomy dimension of 0.83, and the communication dimension of 0.84. In Iran, Ghorbani and Watson implemented this scale in samples of Iranian managers and students, which had good validity and reliability. The Cronbach's alpha ranged between 0.74 and 0.79.

3. Ghorbani et al.'s Integrative Self-Knowledge Scale (2008):

This scale was created by integrating the experiential and reflective aspects of self-awareness to measure self-knowledge based on the integration of past experiences with current experimental awareness and joining it to the desired future. This instrument has 12 items, and its answers range from "mostly true" to "mostly false" on a 5-point

scale. Statements 3, 6, and 9 reflect reflective self-awareness, statements 1, 5, 7, and 8 measure experiential self-awareness, and the remaining statements measure coherent self-awareness. The reliability of this scale in a group of 230 students of Tehran University was as follows: Cronbach's alpha coefficient for experiential self-knowledge was 0.9, and for reflective self-knowledge was 0.84 (Waterman, 1999). The retest reliability of this scale after 7 to 8 weeks with a sample of 44 people was as follows: reliability for experiential self-knowledge was 0.76 and for reflective self-knowledge was 0.68. This scale's internal consistency, criterion validity, and convergence have been reported to be favorable in Iran and America (Qurbani et al., 2008).

4. Freiburg Mindfulness Inventory (2006).

This scale was created by Freiburg (2006). Buchheld et al. (2001) designed the initial form of the Freiburg Mindfulness Inventory, which included 30 questions. Later, a short form with 14 items, which is more suitable for use in the general population, was designed by Wallach et al. (2006). The reliability of this questionnaire was 0.93 in the research conducted by Mohammad Khani and 0.79 in Ghasemi's research (Mohammadkhani et al., 2014; Ghasemi et al., 2015). The reliability of the questionnaire in the present study was calculated through Cronbach's alpha of 0.9.

Results

Regarding demographic characteristics, 17% of the research sample were boys and 83% were girls. In addition, 138 people (39.3%) were studying in the 10th grade, 109 (31%) in the 11th grade, and 105 (29.8%) in the 12th grade. Finally, 326 participants (92.6%) were studying in public schools and 26 (7.4%) were studying in private schools. Before conducting the analysis, the assumptions of the analysis were examined. Table 2 shows the results related to checking the normality of univariate distribution. Due to the skewness and kurtosis values in the range of ± 2 , it can be concluded that the research variables are normal (Kline, 2016). Also, the variance inflation factor index (VIF) was used to assume the non-collinearity of independent variables. According to the tolerance coefficient values of the predictor variables greater than 0.1 and the variance inflation factor values less than 10 for each of the variables, there is no problem of collinearity between the research variables, according to the opinion of Meyers et al. (2006).

All path coefficients were calculated, and P values indicate the relationships' significance.

Results show that the total path coefficient between basic psychological needs ($p < 0.01$, $\beta = 0.406$) and self-coherence ($p < 0.01$, $\beta = 0.341$) with psychological well-being is positive and at the 0.01 level. $O/$ is significant. Also, the path coefficient between mindfulness and psychological well-being is positive and significant at the 0.01 level ($p < 0.01$, $\beta = 0.361$). According to the results, the indirect path coefficient between basic psychological needs ($p < 0.01$, $\beta = 0.220$) and self-coherence ($p < 0.01$, $\beta = 0.259$) with positive psychological well-being at the level of 0.01 is significant.

Conclusion

The findings of the current research indicate the suitability of the conceptual model in predicting psychological well-being; In such a way that integrative self-knowledge and basic psychological needs with the mediation of mindfulness are sufficient in predicting the psychological well-being of students. Based on the findings, integrative self-knowledge is a positive predictor of students' psychological well-being directly and through mindfulness mediation. This finding indicates that high integrative self-knowledge is related to a higher level of psychological well-being. Research results have shown that integrative self-knowledge as a form of self-awareness accelerates the process of self-regulation under challenging situations, such as during exams, in such a way that the student realizes his abilities and can constructively organize his thoughts and feelings. As a result, reaching the desired integrative self-awareness gives the student a higher capacity to face stressful factors. Self-regulation and returning balance to the individual causes efficient coping with stressful factors and reduces perceived tension. On the other hand, in mindfulness, a person pays attention to himself from moment to moment and accepts without resistance. This way, and by the consequent acceptance, students can react more appropriately to their studies, academic problems, and stressful situations that people face moment by moment. In general, it can be said that mindfulness and integrative self-awareness are dimensions of self-awareness that use mechanisms and processes to help better cognitive regulation in students and promote psychological well-being of students.

Also, the findings showed that the satisfaction of basic psychological needs, both directly and through the mediation of mindfulness, is a positive predictor of students' psychological

well-being. In other words, the satisfaction of basic psychological needs is associated with improving health status.

In sum, considering the positive and meaningful relationship of psychological well-being with basic psychological needs and integrative self-knowledge and confirming the mediating role of mindfulness in this process and the importance of psychological well-being in nurturing and improving the academic performance of students, it is essential to pay attention to the level of mindfulness and satisfy the basic psychological needs of students in schools. It is recommended that schools organize programs in their work program to improve students' self-awareness, familiarize and apply more concepts such as mindfulness, and plan educational environments to meet students' basic needs.

Conflict of Interest

According to the authors, this article has no financial sponsor or conflict of interest.

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