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Mindful Self-Care Scale (MSCS): Adaptation and Validation in a Normative Turkish Sample

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Abstract: The aim of this study was to adapt and validate Mindful Self-Care Scale (MSCS) with a normative Turkish sample. Participants of the study were 330 university students (232 females and 98 males) along with the age mean of 20.22 (SD=1.32). In order to validate the six factor structure of Mindful Self-care Scale, a confirmatory factor analysis was conducted. For providing evidence over convergent validity, Mindful Attention Awareness Scale-Adolescent version (Brown, West, Loverich and Biegel, 2011) was concurrently used. The results of the confirmatory factor analysis displayed satisfactory evidence for the six factor Mindful Self-Care Scale ($\chi^2 / df = 1.7$; GFI = 0.87, CFI = 0.92; TLI = .91; RMSEA = 0.05). The scale was also found to be significantly correlated to Mindful Attention Awareness Scale-Adolescent ($r=.27$, $p<.001$). Also, the Cronbach Alpha value for the whole scale was found .89 yielding satisfactory evidence for the internal consistency of the instrument. The results of the study tentatively yielded that the Mindful Self-Care Scale is a valid and reliable assessment tool of self-care in Turkish culture. As well, further studies examining the psychometric properties of Mindful Self-Care Scale are still needed with larger and diverse samples.

Keywords: *Self-care, mindful self-care scale, mindfulness.*

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Introduction

Self-care, that is the topic of interest in many different scientific disciplines, used to be typically defined through its connections to bodily functions and health. As such, Ziguras (2004) underlined self-care as a proactive process covering all of the daily activities that individuals engage to renew and advance their health. This proactive view basically implies that self-care is healthy behavioral patterns such as regular nutrition, making exercise rather than the risky actions like smoking, unsafe driving resulting in illness. On the other side of the theoretical underpinnings, in addition to physical wellness and care, a mental health emphasis was also incorporated into this traditional portrayal of self-care. In that perspective, with mental health promotion adjoin as a care mechanism, self-care is broadly described as the due and liability of individuals to oversee their wellness through maintaining bodily, emotional and moral life domains (Salvucci, 2001). Essentially, self-care through the lenses of this view has three features; caring for yourself is a conscious effort to take action to meet bodily, emotional and moral needs, all individuals merit self-care that taking care of the self is a right and meeting and committing ones' needs is the liability of individuals (Braime, 2013).

Based on these distinct perspectives, measurement efforts of self-care would also be regarded as addressing two sides of a coin. In the first side, as in its traditional and medical meaning, self-care was mainly assessed through the actions to realize main everyday life attainments (e.g. having bath, getting medicines, dressing in) or handling medical concerns especially in individuals with a chronic disease or physical illness (e.g. getting diabetes medicines, engaging in physical therapy practices, committing to the doctor meetings (Riegel, Jaarsma and Stromberg, 2012). On the grounds of this view, various measurement tools assess self-care by solely considering the individuals' promoter activities for their health and physical well-being. One of such instruments, the Therapeutic Self Care Scale (Sidani and Doran, 2010), focuses on assessing activities such as getting the medicines, handling the symptoms like pain, organizing everyday life

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activities, dealing with the ebbs and flows of the living style in long-stay adult home care clients. The other instrument, Appraisal of the Self-Care Agency Scale-Revised evaluates self-care through the agency for holding, developing or lacking self-care capacity in nursing and healthcare fields (Sousa et al., 2010). Accordingly, Self-Care Inventory-Revised also examines the diabetic adults' perceptions about their commitment to the self-care advice for their chronic illness (Weinger, Butler, Welch and La Grace, 2005).

On the other part of the coin, there are extended measures that address both physical and mental well-being constructs as part of the self-care assessment in various populations. For instance, Dorociak (2005) developed the Personal and Professional Self-Care Scale for therapists by specifically including a balanced life, professional evolution, cognitive strategies, equilibrating daily life, professional assistance, physical exercising, regular sleep patterns and diet as part of the personal and professional care mechanisms. The scale is devoted to measuring self-care in this specific group of specialists by referring to the behavioral, cognitive and emotional endeavors one engages to accommodate the physical health as well as mental, professional and social well-being.

The Mindful Self-Care Scale is another such multidimensional instrument examining self-care through individuals' perceived engagement in their physical, cognitive, emotional and social care mechanisms (Cook-Cottone and Guyker, 2018). In this assessment tool, mindful self-care is pictured as a double-layered process: a) holding a mindful awareness in actions toward self-care and b) a full follow up and ponder over the adequacy of general self-care (Riegel, Jaarsma and Stromberg, 2012). Stemming from the attuned model of self (ARMS; Cook-Cottone, 2015a), mindful self-care includes an attentive awareness of both internal experiences and external claims. According to the attuned self-model, the self is a framework that incorporates private inner experiences (i.e., bodily, cognitive and emotional) and outer experiences (i.e., family, social, cultural). If one strives to attain a healthy and favorable relationship with the self, there are two major tasks to be done: a) pursuing a favorable concurrence with and accommodating all of the inner forms of the self and b) concerning themselves with their relations across each ecological systems (Cook-Cottone, 2015b). On this basis, Mindful Self-Care Scale rests upon measuring self-care through a group of feasible practices that contribute to favorable embodiment and wellness. As well, both internal and experiences reflecting upon, physical, cognitive, emotional and social domains of individuals should reflect the self-care characteristics of individuals (Cook-Cottone and Guyker, 2018).

Mindful Self-Care Scale (Cook-Cottone and Guyker, 2018) authentically measures self-care via relating this construct to the original mindfulness theory as well as incorporating internal and external life domains as target self-care mechanisms. In this sense, this instrument reflects a multi-dimensional assessment of self-care through both private (bodily, emotional, cognitive) and social actions of individuals to maintain their physical, psychological and interpersonal flourishing. Also, the novel construct of mindful self-care practice showed therapeutic feasibility in physical and emotional well-being (Linehan 2015) and also diminishing the symptoms related to several psychological disorders (Cook-Cottone 2015a). Based on the connections of mindful self-care to such processes, the initial studies over this construct implement mindful self-care as a healing and protective mechanism in a variety of psychological and physical issues in diverse groups. However, the theoretical and practical studies for mindful self-care are in the infancy phase in both global and Turkish literature. Also, there isn't yet any specific multidimensional measurement tool of self-care assessing the construct through mindfulness and related processes as well as physical care actions in Turkish culture. Gleaned through these rationales, the study aims at adapting and validating the Mindful Self-Care Scale to be used as a mindfulness based multidimensional self-care tool in Turkish culture.

Method

Participants

The sample of the study was 330 university students attending to psychology, psychological counseling and guidance, English language teaching, math teaching, law and international trade departments of Istanbul Medipol University. In the sample group, there were 232 females (70%) and 98 males (29.4 %) with the average age of 20.22 (SD=1.32). A convenient sampling technique was used to determine the sample (Fraenkel, Wallen and Hyun, 2011).

Instruments

Mindful Self-Care Scale (Cook-Cottone and Guyker, 2018) consists of 33 items assessing the frequency of self-care behaviors. In the scale, self-care was divided into six parts: physical care, supportive relationships, mindful awareness, self-compassion and purpose, mindful relaxation, and supportive structure. The scale is a 5 point Likert type instrument (from 1-never to 5-regularly) and only one item, that is item 6, is reversely coded. The results of confirmatory factor analyses showed that the emerged model fit indices support the six factor structure of the scale ($\chi^2/df = 3.02$, SRMR = 0.071, RMSEA = 0.071, and CFI = 0.96). In addition, the internal consistency indicator of Cronbach alpha was .89 for the overall scale while it was .69 for Physical Care, .86 for Supportive Relationships, .92 for Mindful Awareness, .83 for Self-compassion and Purpose, .77 for Mindful Relaxation and .77 for Supportive Structure subscales.

Mindful Attention Awareness Scale-Adolescent version by Brown, West, Loverich and Biegel (2011) is a 14-item instrument to assess the core features of mindful awareness through the perceptive dimension of attention as well as observation and awareness for the present experiences. Higher scores in the scale indicate higher levels of mindful attention and awareness for adolescent groups. The Cronbach alpha coefficient was .82 while test-retest indicator was .79 in the initial development process of the scale. The results of the confirmatory factor analysis for the Turkish adaptation of MAAS-A confirmed the single factor of the scale ($\chi^2 = 162.5$, $df = 75$, $\chi^2 / df = 2.17$; GFI = 0.94, CFI = 0.92; TLI = .90; RMSEA = 0.06) additionally yielded Cronbach Alpha value as .81 indicating satisfactory internal consistency (Aydin-Sunbul, 2016).

Procedure

After granting ethical permissions from Istanbul Medipol University Social Sciences Ethical Committee, the cross-cultural adaptation and validation steps of a) translating the items to the target language, b) determining the equivalence of items in the original form and adapted version and c) exploring the validity and reliability parameters of the adapted form were followed (Hambleton and Bollwark, 1991) First of all, the scale was translated to Turkish by six experts one of whom was from English Language Teaching department and five of them were from Psychological Guidance and Counseling department who are competent and fluent in Turkish and English. Following the decision on the most comprehensive translation, two experts (an Assistant Professor in English Language Teaching department and an Assistant Professor in Psychological Counseling and Guidance department), crosschecked the compatibility between the English and Turkish versions and finalized the form. Then, the researchers contacted to each faculty administrator to explain the rationale of the study and also decide on the suitability of departments and times. Then, the researchers attended to the collaborator instructors' classrooms and introduced the purpose and process of the study. Eventually, 330 volunteer students studying in different departments of Istanbul Medipol University attended to the study

Data Analysis

Before conducting the confirmatory factor analysis, data cleaning, screening procedures were examined through SPSS 20 statistical package program (IBM, 2011). First of all, missing values were screened and mean substitution was conducted due to the fact that the number of empty cells were less than 5% of the whole cells. Then, along with the same statistical program, a number of assumptions for the confirmatory factor analysis were tested before the primary analysis. The sufficient sample size in the confirmatory factor analysis is suggested to be minimum 200 cases along with 5 or 10 units that is 330 for this study satisfying that requirement (Kline, 2011). Also, univariate outliers were examined based on the ± 3.29 criterion for the z scores yielding no data staying out the criterion ranges. Lastly, screening of Skewness and Kurtosis parameters for normality assumption and bivariate scatterplots for the linearity requirement of the confirmatory factor analysis disclosed that the data has a normal and linear distribution for the sample (Tabachnick and Fidell, 2006). Following to obtain satisfactory results for the requirements of the confirmatory factor analysis, a Maximum likelihood estimation method was used to validate the six-factor framework of MSCS by running AMOS 18 program (Byrne, 2001).

Results

In the first step of confirmatory factor analysis, the model fit indicators were checked. The results for the indices emerged for MSCS are shown in Table 1.

Table 1. Model fit indices from measurement models of MSCS

Goodness of Fit Indexes	Measurement Model of MSCS	Criterion Ranges
χ^2/df	1.7	$\chi^2/df < 3$
CFI	.92	CFI > .90 or close to 1
TLI	.91	TLI > .90 or close to 1
RMSEA	.05	.05 < RMSEA < .08
GFI	.87	GFI > .90

Note: CFI=Comparative Fit Index

TLI=Tucker-Lewis Index

RMSEA=Root Mean Square Error of Approximation

GFI= Goodness of Fit Index

As presented in Table 1, the normed chi-square indicator of 1.7 is satisfactory due to being lower than the criterion value of 3 (Kline, 2011). Likewise, both CFI (.92) and TLI (.91) values stay out the acceptable ranges of .90-1.00 (Bentler, 1990; Tucker and Lewis, 1973). Likewise, the RMSEA indices of .05 indicate a satisfactory value by remaining between .05-.08 interval. Lastly, the GIF indicator was found .87 that is not in the acceptable position but very close to the criterion .90 value (Kline, 2011). In this picture, it can be stated that most of the goodness of fit indices emerged to meet the model fit requirements for the six-factor MSCS.

At the next step, both standardized and unstandardized estimates for the 33 items of six-construct MSCS were examined. Results of these estimates along with the standardized errors, t values and the variance explained are exhibited in Table 2.

Table 2. Unstandardized and standardized parameter estimates for MSCS

Construct	Item	Unstandardized Factor Loadings	Standardized Factor Loadings	SE	T	R ²
Physical care	Item1	.29	.24	.11	12.74	.06
	Item2	.51	.46	.08	12.45	.21
	Item3	.63	.51	.09	12.32	.26
	Item4	1.13	.86	.05	8.54	.74
	Item5	1.16	.86	.06	8.55	.74
	Item6	-.45	-.35	.11	12.63	.12
	Item7	1.00	.84	.05	9.29	.71
	Item8	.49	.46	.07	12.45	.21
Supportive relationships	Item9	.61	.71	.04	10.34	.51
	Item10	.80	.78	.04	9.56	.61
	Item11	.81	.75	.05	10.10	.57
	Item12	.64	.56	.08	11.59	.32
	Item13	.74	.69	.05	10.95	.48
Mindful awareness	Item14	.87	.82	.04	8.22	.68
	Item15	.93	.87	.04	6.51	.75
	Item16	.72	.64	.07	11.46	.41
	Item17	.62	.58	.06	11.81	.34
Self-compassion and purpose	Item18	.69	.68	.05	11.04	.46
	Item19	.86	.77	.05	9.96	.60
	Item20	.87	.76	.06	10.24	.58
	Item21	.62	.51	.09	12.05	.26
	Item22	.80	.65	.08	11.43	.43
	Item23	.77	.65	.07	11.4	.42
Mindful relaxation	Item24	.65	.46	.14	11.72	.21
	Item25	.73	.67	.08	8.37	.45
	Item26	.74	.54	.13	10.25	.30
	Item27	.35	.37	.06	12.29	.14
	Item28	.64	.53	.09	11.43	.29
	Item29	.71	.49	.15	11.03	.24
Supportive structure	Item30	.70	.58	.08	11.54	.34
	Item31	.81	.59	.10	11.37	.35
	Item32	.87	.74	.07	9.74	.54
	Item33	.96	.78	.07	8.68	.61

Note. All t values were significant, $p < .001$.

Given the parameters presented in Table 2, it can be stated that the standardized factor loadings change between -.35 and .87 for the individual items of the scale. Only one of the standardized loadings, item 6, has a negative coefficient that is the only reverse item in the scale. The explained variance comes from the items has the range of .06 to .75 that are all statistically significant ($p < .001$).

Convergent Validity

In order to get more evidence over the construct validity of MSCS, Mindful Attention Awareness Scale-Adolescent version (Brown, West, Loverich and Biegel, 2011) was used as the convergent validity assessment. Results of the correlation analysis showed that MSCS and MAAS-A are significantly and positively correlated with each other ($r=.27$, $p<.001$).

Internal Consistency

The internal consistency indicator Cronbach Alpha was calculated .89 yielding satisfactory evidence for the reliability of MSCS. In addition, Cronbach Alpha values for the subscales were found as; .72 for physical care, .81 for supportive relationships, .81 for mindful awareness, .83 for self-compassion and purpose, .66 for mindful relaxation and .80 for supportive structure.

Discussion

The study aimed to adapt and validate the psychometric properties of the Mindful Self-Care Scale in a normative Turkish sample. In the first step, the construct validity for the scale was examined along with confirmatory factor analysis. The results of the confirmatory factor analysis for the six-factor structure of the scale yielded compatible model fit values appeared in the original development study (Cook-Cottone and Guyker, 2018). Given the standardized factor loadings of the individual items in the scale, only one item-item 1- doesn't meet the criterion .30 for an item to load on a factor (Brown, 2006). The item 1 belongs to the physical care subscale and specifically indicates the amount of water individuals consume. In spite of the closeness between factor loading of this item to the cut-off criterion, it can be tentatively argued that drinking water may reflect a vitality of living rather than a care action in Turkish culture. However, this item is still offered to be used as part of the whole scale in later studies except getting weak and unsatisfactory validity and reliability evidence over this item.

The convergence of Mindful Self-care Scale with the Mindful Attention Awareness Scale-Adolescent yielded a low significant correlation. In fact, this result could be explained with the fact that as well as assessing mindfulness ingredient of self-care like mindfulness, mindful relaxation, self-compassion, and purpose, the scale also broadly includes other determinants of self-care such as physical care, supportive relations, and structure. Given the internal consistency proof of the scale, the Cronbach alpha value was found .89 pointing to a satisfactory finding of this psychometric property. In addition, the internal consistency indicators for the subscales also yielded close and satisfactory results to the reliability parameters for the sub-dimensions of the scale as emerged in the initial development study (Cook-Cottone and Guyker, 2018).

The study has both strengths and limitations that other researchers are offered to evaluate critically. The results emerged show that Mindful Self-Care Scale along with its theoretically formed sub-dimensions is a valid and reliable assessment tool of self-care. However, further international and national studies focusing on the psychometric properties of the scale are still required especially for negotiating the cultural influences and perceptions over this construct. Secondly, the initial Mindful Self-Care Scale by Cook-Cottone and Guyker (2018) was correlatively studied and showed significant correlations with the psychological attributes of body esteem and eating disorder risks. As well, in this study, this novel construct was correlatively examined and showed the expected connections to mindfulness. Yet, more is needed to especially anatomize the relations of mindful self-care with many other psychological processes in representative groups. Lastly, lack of randomization over selecting the sample created some limitations for the study. The sample group of the study was formed from 18 years or older university students as it was the case in the original development process. However, the ratio of female and male participants couldn't be controlled through the sampling method of this study. Thus, female participants were slightly higher than the males that form a limitation for the generalizability of the conclusions. Also, the participants were selected from one university that may reflect a single unit within the population that may also hinder the generalizability criterion for the study. Thus, further studies with diverse and more representative groups are still needed to validate the Mindful Self-Care Scale in Turkish culture.

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