

## The Psychometric Characteristics of Maslach Burnout Inventory Student Survey: Among Students of Isfahan University

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Article information	Abstract
<p>Article history: Received: ..... Accepted: ..... Available online: ..... (ZJRMS) 2013; 15 (...): ...-.....</p> <p>Keywords: Academic Burnout Maslach Burnout Inventory Iran Validity Reliability</p> <p>*Corresponding author at: Department of Counseling and Guidance, Faculty of Education and Psychology, University of Isfahan, Isfahan, Iran E-mail: roz_zeinabrostami@yahoo.com</p>	<p><b>Background:</b> In order to fill the gap of tool for measurement of student burnout in Iran, this study was performed on the 238 female students of Isfahan university that were selected by simple random sampling.</p> <p><b>Materials and Methods:</b> The inventory is including 15 items and three subscales. Data were presented by analytical and descriptive statistic and draw table. In order to determine reliability of MBI-SS were used internal consistency method and test-retest.</p> <p><b>Results:</b> Coefficient Cronbach's alpha for the exhaustion, cynicism and academic efficacy respectively was 88, 90, 84 (<math>p&lt;0.05</math>) and showed good internal consistency. Also test-retest reliability about 4 weeks later, obtaining a reliability coefficient of 89, 84 and 67 (<math>p&lt;0.01</math>) respectively for exhaustion, cynicism and academic efficacy. Principle component factor analysis with exploration method with varimax rotation was used to determine construct validity. In order to check the concurrent validity and divergent validity of this inventory were used respectively from the University Student Depression Inventory and the researcher made of scale interest to academic filed and coefficients for the exhaustion, cynicism and academic efficacy respectively were obtained -21, -53, -32 (<math>p&lt;0.01</math>). Also concurrent validity for exhaustion, cynicism and academic efficacy respectively were obtained 74, 68 and 50 (<math>p&lt;0.01</math>).</p> <p><b>Conclusion:</b> This finding was that the Maslach burnout inventory-student survey is a valid and reliable instrument to measure academic burnout girls.</p> <p>Copyright © 2013 Zahedan University of Medical Sciences. All rights reserved.</p>

### Introduction

The word of burnout was reminiscent of psychiatry that his name was Freudenberg. He was interested and curiosity in the issue such as willingness to work, absenteeism and loss of energy in the working environment [1]. Then other researchers began to define the details of burnout syndrome and knew that it consist three elements: emotional exhaustion, depersonalization and reduced personal accomplishment [2, 3].

In the state of emotional exhaustion a person feels that under pressure and her or his emotional resource was being depleted and had gone. Depersonalization, referring to negative, cynical or excessively detached responses to other people at work and reduced personal accomplishment refers to feelings of decline in one's competence and productivity [3-5]. Clinical experiences in the field of burnout speculate that emotional exhaustion and cynicism appear together while inefficacy is observed with a low frequency. Based on previous researches student's burnout syndrome is similar to staff services [6, 7]. Although students don't work officially but they also engaged in some form kind. Performed activities such as attending classes and completing assignments and passing exams were considered a form of busy [8-10].

Burnout in students refers to feeling due to study pressure, having a pessimistic attitude and apathy towards the study and felt inadequate as a student [11-16]. This definition was based on measurement of academic burnout in Maslach burnout inventory-student survey (MBI-SS).

During the past decades various studies measuring student burnout were used from the Maslach burnout inventory-general survey. Schaufeli et al. for measurement of academic burnout offered to use Maslach burnout inventory-student survey [14]. This inventory was a modified form of Maslach burnout inventory-general survey that changes it was done in this inventory and irrelevant questions and inappropriate words has been modified with a good validity and reliability. Reliability of this inventory through the internal consistency in sample of Dutch, Portugal and Spanish has been reported: Spanish samples (EX: 0.74, CY: 0.79, AE: 0.76), Portugal samples (EX: 0.79, CY: 0.82, AE: 0.69), Dutch samples (EX: 0.80, CY: 0.86, EF: 0.67) [13].

MBI-SS applied in many researches and was related with flexible coping [15], personality [17], gender [18], academic success [13], school climate [19], academic major [20] and coursework [21]. Carlotto et al. [22] in a

research for standardization of this inventory for Brazilian college students reported validity for subscales emotional exhaustion 0.81, cynicism 0.59 and for efficacy 0.74. Up to date in Iran this inventory was not used. Thus because of need to use the inventory that be standardized for Iranian student this study was performed.

The main goals of this study were to examine reliability and validity, of MBI-SS among female students of Isfahan university.

## Materials and Methods

The method of study was descriptive and was performed in 2010 in Iran. In this study 238 of the female students of university of Isfahan (Iran) as samples were selected randomly by simple random sampling method. All of participants had the right to had secret name and to all had confidence the results will be private. For investigation of the sufficiency size of sample use KMO and Bartlett's test that results were showed the test was significant and obtained 0.90 coefficients that showed sufficiency size of sample for static analysis. 74.8% in bachelor, 5% in master degree and 0.8% in PhD were participant in research. The most participant of population were 20 years old.

**-The University Student Depression Inventory (USDI)** [23]: The inventory was developed by Kavaja and Bryden [23]. The inventory was consisted of 30 items. Lethargy (9 items, for example: My energy is low), cognitive-emotional (14 items, for example: I think most people are better than me) and academic motivation (7 items, for example: It is useless to go to university). All items were scored on 5-points rating "1"(never) to "5"(always) in response to the statement of "Please circle the number that indicates how often you have experienced each items over the past weeks".

Hejazi et al. [24] examined the validity and reliability of the inventory. Concurrent and divergent validity respectively by Beck depression inventory, Oxford happiness inventory and thoughts of suicide were confirmed. Results of differential validity of this inventory were also reported as satisfactory. Reliability of this inventory with test-retest method and internal consistency was calculated that reliability coefficient for the total scale and subscales of lethargy, cognitive-emotional and academic motivation respectively were 0.93, 0.83, 0.92 and 0.91. Also test-retest reliability coefficients for the total scale were 0.86 and for each of the subscales of lethargy, cognitive-emotional and academic motivation respectively were 0.93, 0.80 and 0.76 [24].

**-The Maslach Burnout Inventory (Student-Survey) (MBI-SS)** [13]: This scale, designed to measure the burnout level of students, contains of 15 items which evaluate the dimensions of Emotional Exhaustion (EX) (5 items, for example: I feel exhausted at the end of university day), Cynicism (CY) (4 items, for example: I feel more cynic about applying my lessons), Academic Efficacy (AE) (6 items, for example: In my opinion I am a good student). Students must indicate the level of

agreement with every item, which were scored on 7-points from 0: Never to 6: Always. High scores on EX, CY and low scores on AE were indicative of burnout (Academic efficacy items are reversed scored).

Concurrent validity coefficient of this inventory was confirmed [13]. The MBI-SS was translated from english into persian and accuracy of translation was confirmed by three experts of department of psychology and counseling in university of Isfahan. Then with back translation method the persian text was reverse into english and was sent for one of manufactures MBI-SS (Schaufeli). After several change in persian text lastly Schaufeli accepted the translation and adaptation.

**-The Interest to Academic Filed:** From the participants were asked to determine their interests to their academic filed by rating from 0 (never) to 100 (severely). Content validity of the tool was confirmed by three counselors that who were expert in career counseling field. The divergent validity of the tool was investigated and approved via the Maslach burnout inventory-student survey that results were showed by table 1.

For statistical analysis used from SPSS-15 with internal consistency (alpha) and test-retest method (alpha), principle component factor analysis (warimax rotation) and correlation.

## Results

Content validity of the persian version of the MBI-SS was approved by three counselor's experts who worked in the department of psychology and counseling in university of Isfahan. In order to check the concurrent validity and divergent validity of this inventory were used respectively from the USDI and the researcher made of scale interest to academic major. As can be seen from table 1, associate between burnout subscales with USDI scale and subscales lethargy, cognitive-emotional and academic motivation were significantly positive and respectively were 0.74, 0.70, 0.70 and 0.71 that is high correlation confirmed the suitable concurrent validity. Also negative and significant correlation between the subscales of EX, CY and AE with interest to academic major scale respectively was -0.21, -0.53 and -0.33 which was confirmed good divergent validity of MBI-SS.

Principle component factor analysis with warimax rotation and exploration method was used to determine construct validity. Considering Eigen values higher than 1. Table 2 displays the significant rotated correlations for 15 items. Factor analysis revealed that the inventory consisted of three factors. These three factors explained 67.27% of the variance. They were EX, CY and AE. The items and factors are shown in table 3 and show good construct validity of Maslach burnout inventory-student survey. In order to determine the reliability of MBI-SS the internal consistency method and test-retest were used. Coefficient Cronbach's alpha for the EX, CY and AE respectively were 88, 90, and 84 and showed a good internal consistency. Then 40 students out of the 238 were randomly selected to examine test-retest reliability about 4 weeks later, obtaining a reliability coefficient of 0.89,

0.84 and 0.67 respectively for EX, CY and AE, which showed a good stability of the tool.

**Table 1.** Correlation between Maslach burnout inventory-student survey (MBI-SS) and University of Student Depression Inventory (USDI) and interest to academic major researcher made scale

Scale and subscales	Exhaustion	Cynicism	Academic efficacy
Exhaustion	1	0.72**	0.39**
Cynicism	0.72**	1	0.43**
Academic efficacy	0.39**	0.43**	1
USDI	0.74**	0.68**	0.50**
Lethargy	0.70**	0.46**	0.53**
Cognitive-Emotional	0.70**	0.66**	0.53**
Academic Motivation	0.71**	0.67**	0.48**
Interest to Academic Filed	-0.21**	-0.53**	-0.32**

$p < 0.01$ \*\*

**Table 2.** Rotated component matrix

Factors	Exhaustion	Cynicism	Academic efficacy
Items			
1	0.74		
2	0.83		
3	0.77		
4	0.76		
5	0.72		
6	0.57		
7	0.61		
8		0.78	
9		0.73	
10			0.73
11			0.79
12			0.71
13			0.57
14			0.66
15			0.78

**Table 3.** Factors and items

Factors	Items
Exhaustion	1, 2, 3, 4, 5, 6, 7
Cynicism	8, 9
Academic efficacy	10, 11, 12, 13, 14, 15

## Discussion

The present study investigated the reliability and validity of the Maslach Burnout Inventory (MBI-SS) among female students in university of Isfahan (Iran). All goals were examined. According to the results and findings of construct validity three factors were obtained from MBI-SS inventory: EX, CY and AE. The results were consistent with the finding of Schaufeli et al. [13] and Carlotto [22] with a difference that the CY in this study have tow items (items: 8, 9) but in Schaufeli et al. [13] or Carlotto research's have four items (items: 6, 7, 8, 9). It seems that items 6 and 7 were more related to EX. In fact item 6 (I have become less interested in my studies since my enrolment at the university) and item 7 (I have

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become less enthusiastic about my studies) referred to exhaustion and reduced interests not to cynicism and doubting. Also this difference may be related to cultural differences and Iranian contexts. The persian version of MBI-SS had satisfactory level of internal consistency among female students in university of Isfahan. Galan, Samaritan, Polo and Giner [25] based on a research that investigated internal consistency of MBI-SS reported Cronbach's alpha for the three subscales: exhaustion 0.78, cynicism 0.78, and efficacy 0.71 that reported results is consistent with the findings of this research. For examine divergent and concurrent validity respectively used from interest to academic filed interest researcher made scale and university depression inventory and results shows that there was a positive correlation between USDI and MBI-SS and negative correlation between interest to academic filed scale and MBI-SS, supporting the concurrent and divergent validity of the former. It is a clear point that a student how that suffer from academic burnout has low or sad mood and has little interest to his or her academic filed and is at more risk of academic failure toward healthy classmate.

A limitation of the present study was that only female students were included and about male students' academic burnout no give any information. Also because of limitation of psychometric for measurement grader's burnout can't use from this inventory because of this inventory only reliable, valid and normalized for female college students. The persian version of the MBI-SS had acceptable validity and reliability in female Iranian university students and the inventory can be recommended to be used in Iranian students just as Hu et al. [8] recommended that the inventory be used in the China also used the inventory was used among Portuguese, Dutch and Spanish [13]. For future research it is recommended that examine the inventory among other populations in Iran.

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## Authors' Contributions

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## Conflict of Interest

The authors declare no conflict of interest.

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