

Validation of Academic burnout scale among Moroccan trainee teachers

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Abstract

With the aim of measuring trainee's academic burnout, the Maslach Burnout Inventory –Student Scale was translated, revised and validated. A cross-sectorial study took place between November and March 2020. The sample consisted 160 trainee teachers (36% males, 64% females) from Kénitra Regional Center of Education and Training (CRMEF). The average age is 27.94 ± 5.44 years. The Data collected was analyzed by SPSS to establish descriptive analysis, calculate reliability, and other psychometric properties. An exploratory factor analysis was used to validate the MBI-SS instrument. The results indicated the conservation of three factors. All subscales had satisfactory reliability. This study can be applied to more specific samples in other regional centers.

Keywords: Trainee teacher, academic burnout, validation, reliability.

Introduction

In recent years, the number of academic burnout studies has increased and gotten a lot of on attention. Despite, the number of studies focused to academic burnout in North Africa, especially on Morocco, still relatively limited.

Academic burnout were described as emotional exhaustion, a tendency to depersonalization, and a feeling of low personal accomplishment displayed in the learning process due to course

load, course stress or other psychological factors [1] Academic Burnout is a problem-affecting student. They feel exhaustion related to demands studies, cynical attitudes and ineptness feelings into studies [2] Beck [3] defines the academic burnout as a psychological syndrome, which includes physical, emotional and psychological depletion [4]. It is characterized by three dimensions : **academic exhaustion** due to study demands, **academic disinterest** towards study and **academic inefficiency** as a student.[5]

Academic Burnout triggered by a chronic academic stress can be caused through course load, inadequate social support, ineffective peer interactions[6], personality traits, family and financial concerns. Thus, academic burnout was manifested by high emotional exhaustion, high cynism and low academic inefficiency. Like all psychosomatic disorders, academic burnout leads to serious physical and mental problems such as anxiety, depression and frustration [7]. In the organizational side, academic burnout may reduce student involvement, academic performance and increased student dropout rate. [5]

For these reasons, it is necessary to develop a valid and a specific Moroccan instrument in order to examine academic burnout into Moroccan trainee teachers and prevent this syndrome at the beginning of their careers. The aim of this study is to evaluate the psychometric validity of Arabic version of MBI-SS dedicated to Moroccan trainee teachers.

Material and Method

Participants

This cross-sectional study took place between November and March 2020. The MBI-SS survey was self-administrated to assess the academic burnout into trainee teachers during training period. The participants were informed about the aim of the study. Participants in this survey were 184 trainee teachers from Regional center of Education and Training in Morocco (KENITRA annex). From these trainees, 24 did not answer to the complete survey and were eliminated from the study. 160 trainee teachers (36% male, 64% female) met the eligibility criteria of our study.

Measures: Maslach Burnout Inventory-Student Scale

To assess academic burnout, Maslach Burnout Inventory-Student Scale was used for this purpose.[8] It is the most commonly scale designed to measure the burnout level related to studies. The constructs contains 15 items that represent three subscales: emotional exhaustion (5 items), cynism (4 items) and academic efficacy (6 items). All items have been adapted to the study field. Some vocabulary has been

replaced such as (university day-training day) (student- trainee teacher). Trainees were asked to indicate the level of agreement with every item, which were scored with 7-point frequency rating scale ranging from 0 (never) to 6 (always). High scores on emotional exhaustion (EE), cynism (CY) and low scores on academic efficacy (AE) are predictive of academic burnout (the academic efficacy scores are reversed).[9]

Questionnaire Translation

An Arabic translation of MBI-SS were established to provide a validated version destined to Moroccan trainee teachers (Arab-speaking population). The Vallerand transcultural method suggested by previous studies have been followed. Four bilingual professors working on collaboration in the same field were devised on two groups. Each of them translated independently in order to have a good quality translation. The group who have no information on the underlying objectives of the study back translates the target language versions into the source language. Based on the consensus of the two committees, the final version were developed and revised following suggestions obtained from a pilot group of 30 trainee teachers.

Statistical methodology

In this study, the MBI-SS validation process was based on two steps. First, the reliability of the scale and three dimensions was calculated through the Cronbach's α coefficient. In order to extract the variables and measure the dimensionality of the instrument, the collected data was then subjected to an Exploratory Factor Analysis (EFA). The factor structure was studied by conducting a principal axis factor (PAF) and oblimin rotation. All data were analyzed by using the Statistical Package for the Social Sciences (SPSS) statistical software.

The Kaiser - Meyer - Olkin (KMO) measurement was used to examine the sampling adequacy. The KMO score should preferably be higher than 0.60. For a feasible factor analysis, Bartlett's sphericity test was calculated. It must be significant ($p < 0.05$).

The internal coherence of all MBI-SS items and sub-scales maintained after oblimin rotation were examined using the Cronbach α .

Results

1. Socio-demographic and professional data

The questionnaire was completed by 160 trainee teacher affiliated to Regional Center of Education and Training (CRMEF). Men represented 36%, while 64% of participants are women. The average age is 27.94 ± 5.44 years. More than two thirds (72.1%) of participants were single. 26.5% are married. 29.4% of the trainees have professional experience in teaching, while 70.6% of them had not worked before entering the training. (Table 1)

Table 1: Socio-demographic characteristics

Characteristics	n (%)
Gender	
Male	58 (36)
Female	102 (64)
Age	
[21-25]	51 (32,1)
[25-30]	70 (43,8)
[30-35]	21 (13,3)
[35-40]	18 (10,8)
Marital status	
Single	115 (72,1)
Married	42 (26,5)
Divorced	3 (1,4)
Academic degree	
Licence	110 (68,4)
Master's	46 (29,1)
Phd	4 (2,5)

2. Questionnaire validity

To conduct exploratory factorial analysis, we chose Principal axis Factor (PAF). The Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity tests are used. The results show that the KMO

presented was $0,841 > 0.5$. The Bartlett's Test of sphericity is significant (sig < 0.001).

Factor structure of MBI-SS defined three factors: factor I was named "emotional exhaustion" and showed an eigenvalue of 5.329, which explained the 35% total variance; factor II, named "cynicism", reached an eigenvalue of 2.439, accounting for the 14% total variance; and factor III, named "academic efficacy", had an eigenvalue of 1.103, thus explaining the 4.9% total variance. Table 1 represent the factor solution obtained. (Table 2)

Table 2: MBI-SS Factor Matrix after Rotation

	Component		
	AE	CY	EE
AE_1	,856		
AE_2	,837		
AE_3	,790		
AE_4	,680		
AE_5	,553		
AE_6	,475		
CY_1		,765	
CY_2		,699	
CY_3		,631	
EE_1			,870
EE_2			,708
EE_3			,664
EE_4			,453
EE_5			,382
Cronbach's alpha	0,88	0,74	0,82
% variance explained	35,006	14,015	4,900
% total variance explained	53,921		
measurement of Kaiser-Meyer-Olkin sampling (KMO)	0,841		

Bartlett sphericity test:	
Chi-square approximate ddl	883,650
Bartlett test	91
	0.000

Discussion

Researchers currently focus on the academic burnout issue. The aim of this study is to examine the multidimensional structure of MBI-SS (Arabic version) in order to diagnose, prevent the prevalence and development of academic burnout into trainee teachers during training and after their assignment. Subsequently, an exploratory factor analysis was performed to reduce the dimensions and validate the construct. The three-dimensional aspect was retained for the first factor emotional exhaustion (EE) due to training requirements, the second factor cynicism (CY) referring to an attitude detached from training and the third factor academic efficacy (AE) related to the feeling of accomplishment as a trainee teacher. The three-dimensional structure has been claimed to be factorial valid for students in several countries [10] [11] [12]. In Serbia, a study conducted by 760 Serbian physicians student [13] determined that principal component analysis with Oblimin rotation indicated three principal components that explain a variance of 64.9%. Similarly in France, the three-dimensional model of the MBI-SS structure was confirmed in study carried out by 667 French students [9]. Shin et al. (2011) [14] reported reliability estimates for the MBI-SS as .86 for exhaustion, .82 for cynicism, and .82 for academic inefficacy. Therefore, the MBI-SS reliability tested by Cronbach's α exceed 0.7. [15]

Ilic [13] reported that Cronbach's α of MBI-SS was 0.757, while Cronbach's α coefficients for the three dimensions Exhaustion, Cynicism and Academic Efficiency were 0.869, 0.856 and 0.852. Yavuz and Dogan [16] showed that α Cronbach's sub-scales emotional exhaustion, cynicism and academic efficiency were 0.838, 0.844 and 0.875, while Tsubakita and Shimazaki [17] revealed that the coefficients α are 0.76, 0.85 and 0.78 respectively. Based on

these results, we can affirm that MBI-SS retained the three-dimensional structure of the original version.

Conclusion

For the purpose of protecting novice teachers mental well-being and avoid losing interest during training period, the MBI-SS instrument was proposed to Moroccan trainee teachers. It may contribute to measure this syndrome and prevent developing in subsequent training stages until professional integration.

Implications and recommendations

If trainee teachers are already exposed to academic burnout in the form of emotional exhaustion and cynicism sense (detachment to study), then how they can escape to its professional impact especially in their development career and their interactions with students?

Academic burnout might lead to higher rates of absenteeism, chronic fatigue, decreased concentration, affects mental health and trainee well-being. A based perspectives related to this topic could enhance trainees knowledge to develop the coping manners. It is important that students have a toolbox of strategies in place to deal with this syndrome and prevented its progression. Further, developing a strong colleague relationships, high self-efficacy sense and management professional skills.

Study limitations

This study were addressed on trainees whom continue their training in Rabat-Salé-Kénitra regional center. For that, there is a need to conduct studies in other regions and compare the results obtained for each representative sample. However, a sample size could be limitation criteria.

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