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Academic burnout among trainee teachers during the COVID-19 pandemic: Effect of sociodemographic factors

Abdelmounaim Bouhaba, Youssef El Madhi¹, Abdelmajid Soulaymani, Hinde Hami

Abstract:

BACKGROUND: The trainee teacher seems to be more and more faced with frustration and stress during the training phase, caused by accumulation of requirements and duties, making them susceptible to the risk of burnout. The purpose of this work is to study the academic burnout of trainee teachers at the Rabat-Sale-Kenitra region's Regional Center for Education and Training Professions during the COVID-19 pandemic.

MATERIALS AND METHODS: Seven hundred thirty-nine trainee teachers responded to a self-questionnaire comprising the Maslach Burnout Inventory–Student Survey scale in its French validated version, as well as stress factors during the academic year 2020–2021. Both inferential and descriptive methods of data analysis were used to represent the effect of sociodemographic variables on burnout levels during the COVID-19 pandemic.

RESULTS: In agreement with the literature, most of trainee teachers show moderate and high levels of academic exhaustion; the main stressors presented are financial instability and training overload, and the level of study influences the scale of burnout among trainee teachers.

CONCLUSION: The result of this study can serve as a predictor of academic burnout among Moroccan trainee teachers.

Keywords:

Burnout, COVID-19, Maslach Burnout Inventory–Student Survey scale, stress, trainee teacher

Introduction

Several organizations, including the International Labour Organization, (2010), and the World Health Organization, (2000), recognize that the work environment and work organization are psychosocial risk factors that, if not properly managed, lead to negative impacts on workers' health, including burnout syndrome.^[1,2] Faced with this phenomenon, there is no doubt that trainee teachers are a specific and vulnerable subpopulation, faced with issues that go beyond the simple framework of academic training.

The teaching profession is considered to be a stressful occupation that generates many cases of burnout. However, this assertion, which is widely held by the general public and by trainee teachers themselves, is not always confirmed in Morocco. In spite of this, it can be assumed that the burnout felt by trainee teachers is likely to have harmful effects on their dynamism and motivation.^[3]

In order to ensure the prevention and treatment of trainee teachers' burnout, it is necessary to go through a good analysis of what causes this burnout, as well as an early identification of the signs that make it up. To ensure and support these approaches, it

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Laboratory of Biology and Health, Faculty of Science, Ibn Tofail University, Kenitra, Morocco,
¹Laboratory of Education, Environment and Health (EES) at CRMEF Rabat / Sale /Kenitra, Morocco

Address for correspondence:

Dr. Abdelmounaim Bouhaba,
Rue Naoures, 1 Hay Saada, N°9, Oujda, Morocco.
E-mail: abdelmounaim.bouhaba@uit.ac.ma

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is necessary to introduce a tool to measure stress among Moroccan trainee teachers and prevent its causes.

The concept of burnout was first described by Freudenberger in the 1970s to reveal professional burnout,^[4] and has been the subject of several researches. The latter defined burnout as a state of stress and depression caused by devotion to one's job in which one fails to reap the benefits resulting in a decreased commitment to work.^[5]

Overall, it is by repeatedly trying to fulfill some requirements that are beyond one's personal capacity that the person becomes exhausted. Although this phenomenon can be seen in professions in which contact with individuals is regular, such as those related to education and health.^[6]

Christina Maslach, professor of social psychology, considers burnout to be a mental and physical exhaustion of people whose work requires constant contact with others. She is also the author of the most widely used psychometric test to evaluate this syndrome, the Maslach Burnout Inventory (MBI).^[7]

Academic exhaustion has a three-dimensional structure: emotional exhaustion (EE) is the fact of being emotionally overwhelmed and exhausted, and thus no longer having the energy to do one's job. (This dimension is considered by many authors to be the most central one and that it alone sums up burnout in a one-dimensional approach (e.g., Pines *et al.*, 1981).^[8] Depersonalization or cynicism (CY) is characterized by impersonal, emotionally detached, negative, and cynical attitudes toward other individuals. Academic effectiveness (AE) or self-efficacy (more precisely its diminution) refers to an individual's belief in his or her performance and skills.

The assessment of burnout in a sample of trainee teachers at the Regional Center for Education and Training Professions (CRMEF) requires the use of a version adjusted to the training context, the MBI-Student Survey (MBI-SS), an adapted version of the Maslach *et al.* burnout inventory.^[9]

The (MBI-SS) scale is composed of 15 items instead of the 22 that make up the original questionnaire (MBI). It measures the three dimensions of EE (e.g., "Studying or attending a course is really stressful for me"), CY (e.g., "I have become more cynical about the potential usefulness of my training"), and AE (e.g., "I believe I am contributing effectively to the courses I attend").

The MBI-SS has shown satisfactory psychometric characteristics for its three dimensions among students in several countries^[10-13] however, only a few studies

have used the MBI-SS to examine trainee teachers' burnout, these latter seem to be confronted with specific stress factors and can be very vulnerable to academic exhaustion.

The aim of this study is to assess the prevalence of academic burnout among Moroccan trainee teachers, using the MBI-SS specific scale. We are interested in the sociodemographic characteristics of trainee teachers reporting burnout levels. The variables that distinguish the burnout levels of trainee teachers: gender, training cycle, personal situation, financial source during training, and distance from place of residence.

In order to achieve this dual objective, a Moroccan team of teacher-researchers and trainers at the Regional Center for Education and Training Professions (CRMEF) and PhD students in collaboration with the Francophonie University Agency (AUF) developed a tool to measure stress factors among Moroccan trainee teachers. This corpus was administered to trainee teachers through the CRMEFs.

Materials and Methods

Study design and setting

The questionnaire developed by the team consists of three main parts:

The first part concerned the main sociodemographic and biographical factors, the second part evaluated the different stress factors (living conditions/training requirements/interpersonal relationships), and the third part was devoted to the exploration of the academic burnout scale: The MBI-SS validated in its French version (Language adopted in teacher training).^[14]

It is an instrument that contains 15 items for which participants fill in a six-point Likert scale ranging from 1 (never) to 6 (always). These items describe three main dimensions: EE, dehumanization or CY, and AE. The result of the MBI-SS is a score reported as "low/moderate/high" for these three dimensions. The extreme values are (5; 30) for emotional exhaustion, (4; 24) for cynicism and (6; 36) for Academic efficiency. A high score for emotional exhaustion and cynicism, or a low score for academic efficiency is enough to infer burnout.

The total number of trainee teachers for the year 2019–2020 out of the four training centers in the Rabat-Sale-Kenitra region was 1416. The total number of trainee teachers who were eligible for our study was $n = 739$.

Study participants and sampling

The trainee teachers from the regional centers of

education and training in the region of Rabat Salé Kenitra (all fields), were eligible for our study. N = 739, with an average age of 27 years.

Data collection tool and technique

The data collection took place from June 2020 to September of the same year and the survey was conducted using the paper and pencil setting, the participation of trainee teachers was voluntary, and their responses were anonymous. The data collected were coded on an Excel database. The smoothing was carried out by excluding the questionnaires ($n = 65$) in which there was a lack of precision and which did not allow a differentiation of sociodemographic variables to respond to our hypotheses.

Ethical consideration

This study was approved by the regional director of CRMEF Rabat with all the necessary permissions. All participants completed and signed an informed consent form, and they were free to discontinue participating in this study whenever they wished.

Results

Participants

Our sample is composed of 739 trainee teachers from the region of Rabat-Sale-Kenitra, their participation was voluntary and anonymous, 417 of them enrolled in primary school, and 322 in secondary school with an average age of 27 years \pm 4.9 years (extremes 21–45 years) and a male majority of 52.5%.

Evaluation of burnout according to sociodemographic characteristics

A total of 739 trainee teachers participated in this study, slightly more than half (52.5%) of the participants were male, and most of them were single (75.8%). All of the study participants had at least a bachelor degree. About 56.4% of the participants were primary school trainee teachers and 43.6% were secondary school trainee teachers [Table 1].

Evaluation of academic burnout

EE is the key component of the academic burnout syndrome, it is measured through five items (e.g., I feel emotionally drained by my training). Our results show that moderate-to-severe levels represent (83.4%) of the syndrome score. CY is the second component of the burnout syndrome, it is measured across four items (e.g., I feel less enthusiastic about my training), 58.1% of the trainee teachers experienced moderate to severe CY. AE is the third dimension of academic burnout, measured by six items (e.g., I learned many interesting things during my training); among the teachers interviewed, 13.9% experience a low level of AE, with a moderate rate of 59% [Table 2].

Data analysis

Differential analyses of Maslach Burnout Inventory–Student Survey and stress factors

Regarding the three dimensions of academic exhaustion (EE; CY; EA), our results show that it is not possible to conclude that there is a significant difference between men and women. The effect sizes are nil and do not allow us to infer a significant variation explained by gender.

Similarly, these results do not show a distinction according to the respondents' personal situation. Again, the effect sizes are nil.

On the other hand, concerning EE according to education ($P = 0.005$) ($\eta^2 < 0.18$), the effect size indicates that 18% of the variation in this dimension can be explained by the difference in education levels. Likewise, for the dimension of CY ($P = 0.03$) ($\eta^2 < 0.012$), according

Table 1: Distribution of trainee teachers according to their sociodemographic characteristics

Variable	n=739, n (%)
Gender	
Male	388 (52.5)
Female	351 (47.5)
Marital status	
Single	560 (75.8)
Married	170 (23)
Divorced	9 (1.2)
Study level	
Bachelor	507 (68.6)
Master	215 (29.1)
PhD	17 (2.3)
Training at the center	
Primary	417 (56.4)
Secondary	322 (43.6)
Funding	
Scholarship	158 (35)
Family support or loan	270 (60)
Savings	22 (5)

Table 2: Distribution of trainee teachers according to their burnout level

Variable	n=739, n (%)
Emotional exhaustion	
Low	123 (16.6)
Moderate	493 (66.8)
High	123 (16.6)
Cynicism	
Low	184 (24.9)
Moderate	452 (61.2)
High	103 (13.9)
Academic efficiency	
Low	103 (13.9)
Moderate	436 (59)
High	200 (27.1)

to level of training, only 1.2% of the variation can be explained by this factor. Finally for the dimension of AE, ($P = 0.019$) the size of the effect remains very small ($\eta^2 < 0.013$) allowing us to conclude that 1.3% of variation can be explained by the level of training. Furthermore, our results show that 46.5% of trainee teachers find themselves – often or very often – forced to use loans to finance their studies, which has an impact on the dimension of CY ($P = 0.001$); however the size of the effect ($\eta^2 < 0.021$) remains small and allows us to conclude that 2.1% of the variation in CY is due to financial need [Table 3].

Discussion

The training period is a transitional stage in a teacher's career, it involves several social changes, such as the place of residence and the environment, educational such as the new learning system, and emotional such as parental alienation. The examination of the associations between stress factors and the components of burnout syndrome should make it possible to provide tools for the prevention of this phenomenon by acting on these stress factors.

Our research focuses more on the academic burnout of trainee teachers, so we believe that it is important to concentrate on stress factors related to the educational environment, and these factors should play a major role in the development of burnout. In various studies,^[15] we mainly find sources of organizational stress, although individual variables may also have an impact on perceived stress.^[16-18]

Overall, our results are consistent with the literature, with more than half of the teachers moderately to severely exhausted.

Regarding the main dimension of burnout (EE), our results indicate that the total majority of the respondents present a moderate-to-severe level of EE, a result that is superior to the literature, especially in Spain with 44.8% of moderate-to-severe EE among medical students.^[19] Regarding CY, more than half of the trainee teachers have moderate to high levels of CY about their training, which reveals that respondents have doubts about the interest and potential utility of their training. In agreement with the literature, with 45.4% moderate-to-severe CY among student teachers in French-speaking Switzerland.^[20] Regarding the feeling of academic efficiency, only 27.1% of trainee teachers experience a high level of academic efficiency. This dimension is based on the feeling of self-efficacy, teachers with low academic efficiency generally feel overwhelmed by the demands of training and feel pressure and stress.^[21] This finding confirmed previous related studies on academic burnout,^[22-25]

Table 3: Analysis of burnout according to sociodemographic variables

Dimensions	Gender		Type of training			Personal situation			Financial source during training			Level of training		
	Male	Female	Primary	Secondary	Single	Married	Divorced	Scholarship	Family	Bachelor	Master	PhD		
EE	17.9 (4.4)	17.7 (4.7)	17.6 (4.6)	18.2 (4.4)	17.8 (4.4)	17.8 (4.9)	16.6 (3.6)	17.8 (4.4)	18.1 (4.6)	17.5 (4.5)*	18.4 (4.4)*	17.5 (4.5)*		
CY	13.5 (3.7)	13 (4.14)	13.2 (4.1)	13.3 (3.7)	13.3 (3.8)	13.2 (4.1)	13.2 (2.7)	13.3 (3.7)	13.2 (3.9)	13.1 (3.8)*	13.5 (3.9)*	13.3 (4.6)*		
EA	22.6 (6.6)	22.9 (5.8)	22.7 (6.6)	22.8 (5.8)	22.7 (6.3)	23.1 (5.8)	20 (6.9)	22.7 (6.2)	22.8 (5.7)	22.55 (6.6)*	23.3 (5.2)*	23.7 (5.5)*		

* $P < 0.05$. EE=Emotional exhaustion, CY=Cynicism, AE=Academic effectiveness

which concluded that effective students reported lower levels of burnout than their less effective colleagues. It is clear, therefore, that students in our sample who progress to higher levels of education (Master's, PhD) have a higher level of AE [Table 3]. In other words, the more efficient and vigorous students feel, the better their academic performance. Thus, while students who feel most committed to their study generally show the least CY, students who feel vigorous do not necessarily feel exhausted.^[12]

In conclusion, the prevalence of the risk of trainee teachers' burnout significantly confirms the hypothesis that burnout can occur during the years of training with some important implications such as financial needs and educational level more appropriate to start screening and prevention. Finally, the main reason for using the MBI-SS is the characteristics of our trainee teacher's population.

The MBI-SS makes it possible to surmount the problems confronted when the trainee teacher has little contact with the students. However, further studies are necessary to confirm these results.

Limitations and recommendation

This research has certain methodological limitations. The complete absence of a valid and specific model of the MBI-SS adapted to the sample concerned, which will be the subject of our next research in order to generalize our results on the entire population.

Conclusion

The results of the present study showed that more than 50% of trainee teachers of the Rabat-sale-Kenitra region show moderate to high levels of academic burnout; some subscales were significantly correlated with financial instability and training overload. Furthermore, the study level influences the scale of burnout among trainee teachers. However, geographical limitations did not allow us the generalizability of the results.

What is known about this topic

- Teachers experience professional burnout
- Some demographic factors affect teacher professional burnout.

What this study adds

- Trainee teachers also experience burnout in Morocco
- Trainee teachers with higher education levels have a higher level of AE and experience less CY.

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Conflicts of interest

There are no conflicts of interest.

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