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Burnout level in Iranian teachers and its related factors: A health promotion approach

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Abstract:

BACKGROUND: Promoting the well-being of students and teachers should be the goal of school mental health programs. A large body of evidence has highlighted that there is an emerging concern regarding the increasing stresses that teachers are dealing with. Burnout is a psychophysical state that is characterized by emotional exhaustion (EE), depersonalization (DP), and low sense of personal accomplishment (PA). We aimed to assess burnout level in teachers' population and its correlation with demographic characteristics because it not only can be affected teachers' health promotion but also student well-being promotion.

MATERIALS AND METHODS: In the present cross-sectional study, 322 high-schoolteachers from the second district of Tehran were randomly selected and were asked to complete the standard Maslach Burnout Inventory questionnaire to evaluate the three areas of burnout. In addition, participants were interviewed for their demographic status (IR.TUMS.MEDICINE.REC.1397.473).

RESULTS: The results of this study showed that male teachers exhibit significantly lower score compared with female ones in all three indicators of burnout including EE, DP, and PA ($P < 0.05$). The number of children teachers and income level in men also influenced all three indices ($P < 0.05$). Regarding the impact of spouse's job status on burnout in men and women, PA was the only unaffected area ($P > 0.05$). Nevertheless, none of the demographic characteristics effected burnout domains in female teacher population.

CONCLUSION: Considering the results of this study that shows the higher burnout level in male teachers and its association with several demographic characteristics such as income level and number of children, special attention should be paid to this gender to reduce possible stress and mental illness.

Keywords:

Burnout, demographic characteristics, education, well-being promotion

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Introduction

Experiencing significant levels of stress is common in schools, about 10%–40% of teachers suffer from high levels of daily stress.^[1] From a public health perspective, teachers feeling physically and emotionally exhausted at the end of the day because of stress. Educational field stress affects teachers' enthusiasm and rate of their turnover.^[2] Stress leads to academic decrease and anxiety, depression, and suicide.^[3] Many

experienced teachers similar to new teachers, leave the profession because they feel unable to deal with modern teaching methods, and novelty in teaching is not acceptable for them.^[4] Burnout is an inappropriate response to chronic work stress and characterized by emotional exhaustion (EE), depersonalization (DP), and low sense of personal accomplishment (PA), leading to worsened job performance.^[5] In other words, burnout is a psychophysical state that presents with a variety of symptoms including exhaustion, frustration, fatigue,

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anger, and feeling of ineffectiveness and frequently takes place in people-related professions such as doctors, nurses, and teachers.^[6]

A large body of evidence has highlighted that there is an emerging concern regarding the increasing stresses, challenges, and consequently burnouts that teachers are dealing with teachers having a hard time that harms their own health.^[7-9] Furthermore it can affect class atmosphere and consequently students' health. Teachers' burnout can negatively impact education quality and mental health of both teachers and students. Student academic outcomes and their motivation are related to teacher burnout.^[10]

Hence, it appears mandatory for the prevention of such burden that underlying etiologies are identified and limited. Looking for the reasons, a broad spectrum of etiologies are addressed from the increment of student bad behavior, student apathy, overcrowded classrooms especially in developing countries like Iran, and increasing administrative loads to the introduction of various additional teaching programs.^[11,12] Furthermore in Iran, based on Iranian culture, men mostly have external and provider responsibilities and women are responsible for the household and child rearing. If, women work outside, they will have responsibility more than men. According to a meta-analysis on 65 studies, teachers frequently fail to adapt the aforementioned risk factors and therefore, burnout is probable in this population.^[13]

The association between demographic factors such as gender and teachers' levels of burnout has been studied extensively, reporting conflicting results. For instance, in terms of gender, two separate investigations indicated that male teachers show significantly greater level of burnout different aspects in comparison with female teachers.^[14,15] whereas Toker detected gender as a salient differentiating variable for merely EE.^[16]

At the first time in this study in Iran, to the best of our knowledge, however, no study has ever evaluated the difference of burnout level between male and female teachers based on other demographic characteristics such as monthly income, educational level, and job status of the partner. As far as we can tell, evaluation of the relationship between teachers' burnout and demographic variables remained limited.

This study was conducted to assess burnout level in Iranian teachers and its related factors such as: sex, number of children, educational level, income level and teaching hours in week through self-report questionnaire. We hypothesize that the findings from this study would shed light on various possible characteristics contributing to the mediation of burnout in teachers' society and would provide assistance to

responsible administrators considering such factors in enhancing the effectiveness of educational system.

Materials and Methods

Study design

In the current cross-sectional study, we aimed to evaluate the burnout level among teachers using the Maslach Burnout Inventory (MBI) questionnaire and its association with several demographic characteristics. The protocol of the present investigation was approved by the Institutional Review Board of (IR.TUMS.MEDICINE.REC.1397.473]. The study was in accordance with successive revisions of the Declaration of Helsinki. Participants were informed about the process and purpose of the study; then a written informed consent was obtained.

Study Participants

In this study, we recruited a representative sample of high schoolteachers, during the middle of the school year ($N = 322$), composed of women and men teachers. The teachers were randomly selected from ten high schools in Tehran 2th region. Then, teachers who accepted to participate in the study were instructed how to proceed and complete the survey procedures required by this study. Besides, the teachers were informed that their information would remain anonymous.

Maslach burnout inventory

To assess different levels of burnout in Iranian teachers, we used the MBI Education Survey (MBI-ES), which was originally developed by Maslach as the gold standard for measuring burnout in the education system.^[17]

MBI-ES is a 22-item scale that is divided into three dimensions: EE (EE; 9 items), low sense of PA (PA; 8 items), and DP (DP; 5 items). Responses for each item range from 0 representing "never" to 6 that is representative of "every day". Then, score of per dimension was estimated by calculating the sum of the relevant items. The validity and reliability of MBI-ES have been confirmed in various populations.^[18,19] Cut-off scores for EE: low ≥ 27 , moderate 17–26, and high < 16 ; for DP: Low ≥ 13 , moderate 7–12, and high 0–6; and for PA: Low ≥ 37 , moderate 31–36, and high 0–30.

Sample size

There are 900 high schoolteachers in the second strict of Tehran. A minimal sample size of 322 was calculated, assuming confidence interval of 95%, $P = 0.2$, $q = 0.8$, and $d = 0.05$, based on previous literature.^[20]

Statistical analysis

Statistical Package for the Social Science Software (SPSS version 22; IBM Company, New York, United States)

was used for statistical analysis. $P = 0.05$ or below was regarded as significant. The Shapiro–Wilk test and probability graphs were used to check normality of the baseline data. Distribution of data was normal. Comparing two independent variables, we used the independent samples t -test and the Mann–Whitney U-test in case of normality and abnormality of data, respectively. Besides, for comparing three independent variables, we used the one-way analysis of variance test and the Kruskal–Wallis test in case of normality and abnormality of data, respectively.

Results

Burnout domains level

Three hundred and two (91.5%) teachers had an EE score of below 25, whereas 11 (3.3%) and 17 (5.2%) participants had an EE score of 26–29 and >30, respectively. In terms of DP, 96 (29.1%), 205 (62.1%), and 29 (8.8%) obtained <6, 7–14, and >15 scores on MBI, respectively. Finally, our results showed that 321 (97.3%) and 9 (2.7%) teachers have a PA score of <36 and 37–43, respectively.

Association between demographic characteristics and teacher’s burnout

IN this research, 54.2% of participants were female and 45.8% were male. 17.6% were single and 82.4% were married. 19.9% teachers were in Associate’s degree, 65.8% in Bachelor’s degree and 23.3 in Master’s degree education level.

Mean and standard deviation of age were 42.11 ± 7.17 years with a range of 24–58. Mean and standard deviation of age duration of work were 20.45 ± 7.30 years with a range of 2–35. Mean and standard deviation of teaching hours in week were 23.70 ± 4.98 h with a range of 2–44.

Using the independent samples t -test, we identified that male teachers exhibit significantly lower score compared with female ones in all three major components of MBI, indicating higher grades of burnout in the female gender (EE: $P < 0.001$; DP: $P = 0.006$; PA: $P < 0.001$). Several other demographic features were also associated with burnout domains, which are evident in Table 1.

Besides, income level, number of children, and spouse’s job status affect burnout components in male teacher, whereas none of demographic variables influenced teacher burnout in female population ($P > 0.05$).

Comparison of the two genders in burnout domains based on their demographic status

The difference between the genders in burnout level according to demographic parameters is completely described in Table 2. In most cases, male teachers had lower score in all three aspects of MBI, demonstrating

Table 1: The association between demographic conditions and burnout domains in participants

Variables	EE	DP	PA
Gender			
Male	9.01±10.16	7.1±2.78	27.81±6.1
Female	17.67±6.31	11.28±3.79	20.63±7.99
P^*	0.00	0.00	0.00
Number of children			
0	9.27±10.80	7.91±3.99	23.79±7.90
1	15.28±8.00	10.10±3.83	21.73±8.31
>1	14.55±8.99	9.49±3.87	25.52±7.55
P^{**}	0.00	0.00	0.00
Educational level			
Associate’s degree	14.97±6.30	10.02±3.26	20.19±7.51
Bachelor’s degree	14.15±9.24	3.96±9.68	23.98±7.56
Master’s degree	14.55±8.99	4.01±8.18	25.46±8.30
P^{**}	0.12	0.01	0.00
Income level (million to man)			
<2	12.96±9.43	9.19±3.44	23.96±7.96
2-4	13.72±8.98	9.44±4.22	23.23±8.16
>4	14.36±10.58	9.28±3.41	26.31±7.27
P^{**}	0.88	0.78	0.73
Spouse’s job status			
+	13.94±9.14	8.81±3.64	24.32±8.32
-	16.85±7.10	11.59±3.67	22.60±7.95
No spouse	7.56±10.52	7.40±3.77	24.81±7.00
P^{**}	0.00	0.00	0.16
Teaching h in week			
<20	16.00±7.40	9.83±4.21	26.70±6.82
20-30	13.53±9.28	9.42±3.97	24.06±7.91
>30	13.14±10.83	8.69±3.61	21.02±8.84
P^{**}	0.36	0.42	0.01

* t -test ($P < 0.05$ is significance), **ANOVA ($P < 0.05$ is significance). EE=Emotional exhaustion, DP=Depersonalization, PA=Low sense of personal accomplishment

that being female is protective against burnout incidence mainly irrespective of other demographic variables.

Discussion

In this study, we aimed to evaluate burnout level in teacher population and assess the possible demographic variables contributing to burnout mediation. Both males and female teachers experienced significant EE in comparison with population of Maslach study^[21] that shows the symptoms were because of work-related parameters such as workload, which could lead to EE. Moreover, both males and females exhibited high levels of DP as well, which indicates that the educators have relatively negative attitude toward the people they are working with, for instance, students and parents. Furthermore, both genders indicate high levels of reduced PA. According to results, female educators indicate high levels of burnout than male educators. It indicates that female teachers were more affected in terms of commitment toward their job in comparison with male teachers. This is same with a result of previous study.^[12]

Table 2: The association between teachers' burnout and demographic features in the two genders

Variables	Gender	EE	P	DP	P	PA	P	
Number of children	0	Male	3.95±8.53	0.00	5.86±1.92	0.00	25.53±7.08	0.02
		Female	18.44±7.74		11.44±4.19		20.80±8.47	
	1	Male	9.34±11.06	0.00	6.96±2.89	0.00	27.07±7.40	0.00
		Female	17.14±5.68		11.08±3.56		20.06±7.90	
	>1	Male	11.56±9.77	0.00	7.80±2.91	0.00	29.24±4.65	0.00
		Female	18.01±6.51		11.45±3.94		21.23±7.99	
Education	Associate	Male	4.80±9.09	0.04	6.80±1.78	0.00	26.40±4.92	0.02
		Female	16.61±3.92		10.54±3.16		19.19±7.42	
	Bachelor	Male	9.53±10.51	0.00	7.29±3.01	0.00	27.93±5.64	0.00
		Female	17.82±5.96		11.57±3.59		20.85±7.7	
	Master	Male	8.44±9.61	0.00	6.78±2.36	0.00	27.72±7.14	0.00
		Female	18.18±9.46		10.77±5.08		21.29±8.79	
Income level (million)	<2	Male	5.81±9.78	0.00	6.45±2.06	0.00	29.63±4.40	0.00
		Female	17.45±5.80		10.91±2.99		20.40±7.65	
	2-4	Male	8.05±9.64	0.00	6.59±2.72	0.00	26.63±7.91	0.00
		Female	17.63±5.91		11.40±3.96		20.88±7.97	
	>4	Male	12.66±9.61	0.05	8.50±2.77	0.02	29.30±3.41	0.00
		Female	18.33±9.64		11.11±4.08		19.33±9.05	
Spouse's job status	+	Male	11.48±9.96	0.00	7.64±2.93	0.00	28.38±6.12	0.00
		Female	17.19±6.52		10.35±3.91		18.96±7.81	
	-	Male	6.22±8.51	0.00	6.11±2.71	0.00	29.22±5.44	0.01
		Female	17.97±5.96		12.17±3.26		21.90±7.87	
	No spouse	Male	3.13±8.17	0.00	5.92±1.84	0.00	25.97±6.05	0.1
		Female	18.37±7.33		11.00±4.81		22.00±8.47	
Teaching (h)	<20	Male	12.00±8.99	0.07	8.10±2.99	0.1	29.70±4.05	0.09
		Female	18.00±5.73		10.70±4.53		25.20±7.50	
	20-30	Male	8.62±9.80	0.00	6.91±2.67	0.00	27.85±6.37	0.00
		Female	17.80±6.23		11.60±3.62		20.76±7.66	
	>30	Male	9.81±12.68	0.04	7.71±3.22	0.08	26.66±5.46	0.00
		Female	16.47±7.50		9.66±3.79		15.38±7.97	

EE=Emotional Exhaustion, DP=Depersonalization, PA=Low sense of personal accomplishment

In last research, they were reported that burnout in teachers can be because of work-related parameters such as low salaries, demanding management, adoption of inadequate postural aspects, excess of noise, classes with excessive amounts of students, and accumulation of extra class homework. Furthermore, health problems such as, voice problems, pain in their legs, due to staying on their feet during classes, and pain in the spinal cord.^[22] Several researchers have reported that students' satisfaction at school decreases as they grow older. Hence, in high school control of class is most difficult than other levels.^[23] Although burnout syndrome is not yet recognized as an occupational disease, a majority of researchers link it to work organization and situate it specifically with in a stressful professional environment.^[24,25]

The results showed in this work reinforce the female participation in the teaching career, which is similar to other studies with samples of teachers. Most of the

teachers were married, women, in which household chores accumulates with work, creating domestic overload.^[25] Working experience average was 20.4 years and age average was 42.11 years indicating that most teachers started their professions after 32 years old and they have high teaching experience. In this regard, factors such as gender, number of children, educational level, and spouse's job status were associated with burnout domains, while income level and teaching hours nearly did not show such relationship. Significance levels relating to the educational levels of educators are represented by Table 1. Educators with associate's degree showed higher tendencies toward DP and reduced PA than bachelor and master. Higher level education may be help teachers perceive higher self-confidence and manage classes better.

It shows that educators face burnout regardless of the level education. All of them are emotionally fatigued

due to over exhaustion from daily conflicts in the working environment. These results are in line with last studies.^[26,27]

Categorizing the participants based on their gender, we observed a significant worse condition in females, and the result was followed last studies.^[26] The result of the present research showed the mean of burnout scores in female not to be associated with several of demographic characteristics including number of children, income level, and spouse's job status. However, these demographic characteristics showed to be associated with burnout in male. This issue could be justified by the fact that men have the main responsibility to manage the family in our society. The association between income level and gender in burnout has been controversial in previous studies. For instance, in contrast to our results, Carlotto and Palazzo Ldos did not find any correlation.^[28]

Finally, we found a number of children as a factor merely affecting male teachers' burnout, while Saberi *et al.* indicated that it is associated with work-related burnout in neither male nor female teachers. In this study, scores of all burnout domains were greater among women, which corroborate with the study of Silva and Carlotto,^[29] which presented greater indices of EE and DP among women.

Although this study had major strengths such as favorable sample size and homogenous participants, several limitations should be noticed to prevent overgeneralization of the findings. First, as our findings suggested, number of children, spouse's job status, and income level could affect burnout level in male teachers. These parameters are relatively related to familial rather than workplace condition. Further investigations are warranted to adjust for these variables to provide a better insight in to job-related burnout. Second, all of our participants were selected from high schools of the second district of Tehran, and therefore, they cannot be considered representative of the Iranian teacher population, and future research should have the aim of replicating the present findings with a nationally representative sample. Further research should also involve teachers from other educational systems, to assess whether and to what extent the present findings also pertain to other settings, especially those in which children with special needs are not included in mainstream classes.

In summary, this study showed that high schoolteachers in Iran experience burnout nearly in all three domains including EE, DP, and low sense of PA. Gender plays a determining role in generation of such condition since we observed remarkably higher burnout level in female

teachers. Interestingly, this investigation also suggests that several other demographic variables can influence the higher level of burnout in males including number of children, income level, and spouse's job status. However, further studies are required to shed light on other affecting factors and also change in teacher burnout level over time. We should promote teachers' health in physical and mental domain. In this way, we obtain many advantages in educational field such as educational promotion and students' health promotion. A meta-analysis conducted by Parks and Steelman found that participation in wellness programs is related to several positive outcomes.^[30]

Teacher education could help student teachers to formulate reasonable demands to place on the school leadership, when the talk of burnout starts to become a burden, or if they start to notice symptoms of burnout. There is a tendency to view the problem as something each individual is responsible for combating without collective action. This could be compared to Jones' (2016) study showing that long-term urban teachers sometimes overlook chaotic circumstances to sustain themselves in the profession. Collective action could include receiving support from colleagues, although relying on this is problematic since colleagues are both a source of support and sometimes the cause of emotional challenges (Löfgren and Karlsson, 2016), as exemplified in the perceived cause of collegial negativity.

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Conflicts of interest.

There are no conflicts of interest.

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