International Journal of Religion
2024
Volume: 5| Number 5 | pp. 832 – 841
ISSN: 2633-352X (Print) | ISSN: 2633-3538 (Online)
ijor.co.uk
DOI: https://doi.org/10.61707/4ajwy094

Teaching Burnout in Student-Teachers and Professional Teachers: Teaching Burnout Across Teacher Groups, Genders and the Link of Teaching Burnout to Teaching Satisfaction

Do Hong Cuong[1], Nguyen Dang Trung[2], Do Hoang Duong[3], Ha Thi Ngoc[4] and Bui Duc Nhan[5]

Abstract

Although teaching burnout is considered a risk factor for teaching satisfaction, there remains a lack of comprehensive understanding regarding its impact on both student-teachers and professional teachers. The Maslach Burnout Inventory stands out as a widely recognized tool for measuring burnout, yet little is known about its measurement invariance across teacher groups and teachers' genders. The current study therefore established measurement invariance across teacher groups and genders to reveal possible differences in the experience of teaching burnout across teacher groups and genders. Moreover, the current study investigate whether teaching burnout is a risk factor for teaching satisfaction in the teacher groups. 649 participants took part in the study (12.8% males, Mage = 34.6 (SD = 11.1). Results indicated that the MBI was invariant across teacher groups and genders. Student-teacher groups experienced less exhaustion and less professional efficacy. No gender difference in the experience of different aspects of burnout was found. Finally, exhaustion and cynicism significantly and uniquely negatively predicted teaching satisfaction, whereas professional efficacy significantly and uniquely positively teaching satisfaction. Student-teachers should be equipped with appropriate knowledge and skills to handle burnout in their future teaching career during their teacher training program.

Keywords: *Student-Teachers, Teaching Burnout, Measurement Invariance, Teaching Satisfaction, Maslach Burnout Inventory*

INTRODUCTION

Burnout can be defined as the depletion of physical and emotional energy resulting from conditions of work (Freudenberger, 1974). Burnout can be conceptualized into three distinct components, which are emotional exhaustion, depersonalization and reduced personal accomplishment (Maslach and Jackson, 1981). The profession of teaching is characterized by the recognition of teaching practices as demanding and high-pressure environments, which might substantially elevate the probability of educators encountering symptoms indicative of burnout (Skaalvik & Skaalvik, 2020). Prior research indicated the inherent nature of the teaching profession, illuminating a spectrum of challenges that predispose educators to a heightened susceptibility to experiencing burnout. These challenges can include three interconnected dimensions: (1) the emergence of emotional exhaustion, stemming from the depletion of energy reserves allocated to fulfilling the multifaceted demands of teaching; (2) the onset of depersonalization, manifested by a gradual erosion of empathy and connection towards students and the broader educational community, leading to a sense of detachment and cynicism; and (3) a decline in personal accomplishment, characterized by a pervasive self-assessment marked by feelings of inadequacy and diminished efficacy in executing pedagogical responsibilities (Anderson & Iwanicki, 1984; Maslach and Jackson, 1981; Maslach & Pines, 1977).

Differences In Burnout Levels Between Student-Teachers and Professional Teachers in The Teaching Field

Prior studies suggested that the vulnerability to teaching burnout extends not only to professional teachers but also to burgeoning student-teachers in the process of preparing for their future roles in professional teaching (e.g., Clark et al., 2015). For example, student-teachers are normally required to do an internship, in which they

[1] Hanoi Metropolitan University Hanoi city, Vietnam. E-mail: dhcuong@daihocthu.edu.vn, Orcid number: https://orcid.org/0000-0002-4938-4696

[2] Hanoi Metropolitan University Hanoi city, Vietnam. Orcid number: https://orcid.org/0009-0001-7661-6894

[3] Hanoi Metropolitan University Hanoi city, Vietnam

[4] Hanoi Metropolitan University Hanoi city, Vietnam

[5] Hanoi Metropolitan University Hanoi city, Vietnam

play the role of teachers in class but they also play the role of students, for example under the supervision of mentors (e.g., Clark et al., 2015; Roselina, 2022; Haider et al., 2019). Playing both roles of student and teacher might be a challenge for student-teachers since they might feel directionless about playing these two roles. Additionally, during the internship, student-teachers might be overwhelmed, resulting from the lack of the necessary content knowledge and pedagogical skills needed to handle diverse situations that arise in the classroom (Burn, 2007; So & Kim, 2009). These studies suggested the complicated inherent in the journey towards becoming an effective teacher, underscoring the potential for student-teachers to grapple with the triad of burnout symptoms: emotional exhaustion, precipitated by the taxing demands of their training and educational responsibilities; depersonalization, characterized by a distancing from the student body and educational community, often accompanied by feelings of detachment and cynicism; and a diminished sense of personal accomplishment, wherein the aspiring educators confront self-doubt and a perceived lack of efficacy in their pursuit of pedagogical excellence.

Therefore, the research question here is whether student-teachers encounter a higher level of burnout compared to teachers in the realm of teaching performance. It is unfortunate that, to date very few comprehensive investigations have been conducted to address this critical research question. Thus, the present study was dedicated to bridging this gap by conducting a comparative analysis aimed at elucidating potential variations in burnout levels across both professional teachers and student-teachers.

Differences In Burnout Levels Between Female and Male Teachers in The Teaching Field

Recent research has increasingly emphasized the importance of understanding potential gender differences in teaching burnout (Garcia-Arroyo et al., 2019; Jamaludin & You, 2019; Purvanova & Muros, 2010; Husain et al., 2021). While both male and female teachers might face similar job demands inherent in the teaching profession, emerging evidence suggests that there are potential variations in how these challenges manifest and are coped with (Jamaludin & You, 2019; Redondo-Flórez et al., 2020; Giwanatara & Hendrawan, 2021). Studies have indicated that female teachers, in particular, may be more susceptible to experiencing emotional exhaustion, possibly due to the additional demands associated with caregiving roles often assumed by women both inside and outside the workplace (e.g., Noor & Zainuddin, 2011; Rumschlag, 2017). Conversely, male teachers may exhibit higher levels of depersonalization, characterized by feelings of detachment from their students and their school communities (e.g., Nagar, 2012). Moreover, differences in coping strategies and social support networks between genders may further influence the experience of teaching burnout. Therefore, a comprehensive understanding of gender roles in teaching burnout is deemed necessary, which helps suggest potential targeted interventions and support mechanisms aimed at mitigating burnout risk and promoting overall well-being among teachers of all genders.

Measurements Of Differences in Teaching Burnout Between Professional Teachers Vs. Student-Teachers and Between Male Teachers Vs. Female Teachers

To effectively compare differences in teaching burnout between professional teachers and student teachers, as well as between male teachers and female teachers, it is necessary to address methodological concerns regarding burnout measurement. Among the various instruments available, the Maslash Burnout Inventory emerges as a promising option, given its established efficacy in measuring teaching burnout within the teaching profession. The Maslach Burnout Inventory is a modified version of the Maslach Burnout Inventory-General Survey for use in school contexts, for example for students (Schaufeli et al., 1996; Schaufeli et al., 2002). The modified MBI consists of three separate scales reflecting three key components of burnout, all of which are Exhaustion, Cynicism and Professional Efficacy (Schaufeli et al., 2002). According to Schaufeli et al. (2002), the first component of Exhaustion was designed to measure emotional exhaustion resulting from studying. The second component of Cynicism was designed to measure the students' lost faith in the effectiveness of academic work. Finally, the third component of Professional Efficacy was designed to assess students' evaluation of the effectiveness of their studying(Jam et al., 2010). These advantages suggest the practical utility of the MBI in exploring disparities in teaching burnout between teacher groups, for example differences between professional teachers and student-teachers and between male and female teachers. However, there remains a paucity of information concerning the measurement invariance of the MBI across these groups. Lacking of measurement

invariance of the MBI across teacher groups (e.g., professional teachers vs. student-teachers; male teachers vs. female teachers) poses challenges in accurately comparing teaching burnout levels among these groups. Therefore, establishing measurement invariance across these teacher groups is crucial to enable meaningful comparisons and therefore enhance the validity of findings.

The Link Between Teaching Burnout and Teaching Satisfaction

The Job Demands-Resources (JD-R) model posits a fundamental link between job burnout and job satisfaction. In accordance with the JD-R model, job demands and job resources are two pivotal factors that influence employees' performance and overall well-being (Bakker & Demerouti, 2014). When employees encounter high job demands without sufficient resources, they are at a heightened risk of experiencing burnout, characterized by exhaustion, detachment from work, and a reduced sense of competence, subsequently leading to decreased job satisfaction (e.g., Han et al., 2020). Within the context of teaching, this relationship is particularly salient, since heightened levels of teaching burnout are logically associated with lower levels of teaching satisfaction. While previous research has provided evidence supporting this association, such studies have primarily focused on professional teachers, not considering both student-teachers and professional students as a whole. Consequently, the present study was dedicated to addressing this gap by investigating whether teaching burnout played unique roles in predicting the development of teaching satisfaction among both student-teachers and professional teachers.

The Current Study

The present study aimed to utilize the Maslach Burnout Inventory (MBI) scale to evaluate differences in burnout levels between teachers and student-teachers. The selection of the MBI is based on two primary considerations. First, the MBI comprehensively captures the core dimensions of burnout, encompassing emotional exhaustion, depersonalization or cynicism and reduced feelings of personal accomplishment or lack of proficiency. Second, the scale has demonstrated robust reliability and validity across various cultures and contextual settings, including school contexts in non-Western countries (Schaufeli et al., 2002; Vu & Bosmans, 2021).

Given that the MBI has not been previously used in samples comprising both student-teachers and professional teachers, the present study was conducted to evaluate whether the three-factor structure of the MBI could be replicated in the sample of student-teachers and teachers as a whole. Additionally, the current study seeked to establish measurement invariance of the MBI across student-teachers and teachers. Given the important role of genders in burnout experience (e.g., Worly et al., 2019), we also examined whether the MBI is invariant between male and female teachers. Subsequently, following the establishment of measurement invariance, the present study evaluated whether there were differences in three key aspects of burnout in teaching, all of which are emotional exhaustion, cynicism and professional efficacy across student-teachers and teachers and between male and female teachers. Additionally, the current study considered whether genders play a role in the experience of burnout in teaching practice since findings on the effect of gender on the experience are still inconsistent (Purvanova & Muros**,** 2010). Finally, the current study examined the links between the three separate aspects of teaching burnout and teaching satisfaction. It is hypothesized that (H1) exhaustion significantly and uniquely positively predicted job satisfaction, (H2) cynicism significantly and uniquely positively predicted job satisfaction and (H3) professional efficacy significantly and uniquely negatively predicted job satisfaction

METHODS

Participants

There were 649 participants in total taking part in the study (12.8% males, M_{age} = 34.6 (*SD* = 11.1)). Among the participants, 25.6% were student-teachers, 27.4% were secondary school teachers and 47.0% were primary school teachers. Concerning teaching experiences, the student-teachers were all second-year students and had

finished a pedagogical internship, while the teachers had an average of 16.5 years of teaching experience (*SD* = 8.64).

Instruments

The Maslach Burnout Inventory (MBI, Schaufeli et al., 2002) was used to measure learning burnout. The MBI has been validated in a sample of Vietnamese students by Vu and Bosmans (2019). Since the MBI was used for teachers, the corresponding words were changed to suit the teaching field. For example, the sentence "*I feel exhausted from studying*" was changed to "*I feel exhausted from teaching*" The MBI has a total of three subscales, including Exhaustion (five items, e.g., "*I feel exhausted from teaching*"), Cynicism (four items, e.g., "*I became less enthusiastic with teaching*") and Professional Efficacy (six items, e.g., "*I can solve all the problems arising from teaching effectively*"). All the items have answers ranging from 0 (never) to 6 (always). Cronbach's Alpha were all sufficient for the Exhaustion (α = .91), Cynicism (α = .89) and Professional Efficacy (α = .91)

Teaching Satisfaction was a ten-score item used to evaluate how student-teachers and teachers are satisfied with teaching. The question was designed by the study's authors and asks the participants to rate their satisfaction with teaching on a scale of 0 (*completely not satisfied*) to 10 (*completely satisfied*)

Procedure

The participants took part in the study through two online surveys, one of which is for student-teachers and the other for professional teachers. Before filling out the questionnaire, they were informed about the goal and the nature of the study and were asked whether they agreed to participate in the study by answering the online questionnaire. After that, the student-teachers and the teachers who agreed to participate in the study filled out an online form containing the study's questionnaire. As a result, the final data was obtained for the current study.

Analytic Plan

Confirmatory Factor Analysis was used to evaluate whether the original three-factor structure of the MBI would be supported by the study's data. Model fit was examined using the comparative fit index of CFI ($\geq$ .90), the root mean square error of approximation (RMSEA $\leq$ .08) and the standardized root-mean-square residual (SRMR $\leq$ .08) (Brown, 2014; Byrne, 2013). Given the non-normal distribution of the current data (see Table 1) the maximum likelihood estimation with robust (Huber-White) standard errors for both complete and incomplete data was used for the CFA and the measurement invariance analysis.

Further, measurement invariance analysis was used to evaluate whether the three factor-structure is invariant across teacher groups (e.g., student-teachers and teachers) and genders (e.g., males and females). Three consecutive levels of measurement invariance (e.g., configural invariance model, metric invariance model and scalar invariance model) were considered in stepwise multigroup CFA for both types of group separately. In the measurement invariance analysis, three nested models were compared, in which the least restricted models were compared to the most restricted models (i.e., configural measurement invariance vs. metric measurement invariance, metric measurement invariance vs. scalar measurement invariance) (Meredith, 1993; Putnick & Bornstein, 2016). Model fit of the configural model was based on the comparative fit index of CFI ($\geq$ .90), the root mean square error of approximation (RMSEA $\leq$ .08) and the standardized root-mean-square residual (SRMR $\leq$ .08) (Brown, 2014; Byrne, 2013). The fit of the configural model suggests the same latent factor structure (the three-factor structure of the MBI) is invariance across the concerned groups (i.e., student-teachers vs. teachers; males vs. females). The second model, which is the metric model was examined, in which the factor loadings of the items on the corresponding latent factors were constrained across the concerned groups (i.e., student-teachers vs. teachers; males vs. females). The factor loadings of the metric model were considered to be invariant across the concerned groups if the metric model does not significantly worse fit than the configural model. The third model, which is scalar model was evaluated, in which all item intercepts were constrained across the concerned groups (i.e., student-teachers vs. teachers; males vs. females). If the scalar model does not significantly worse fit than the metric model, this suggests the invariance of the item intercepts across the concerned groups (i.e., student-teachers vs. teachers; males vs. females).

Criteria for considering the significant differences across the nested models (i.e., configural measurement invariance vs. metric measurement invariance, metric measurement invariance vs. scalar measurement invariance) are the changes in CFI, RMSEA and SRMR (Chen, 2007). More specifically, the criteria for change from the configural model to the metric model are CFI < .010, RMSEA < .015 and SRMR < .030. Similarly, the criteria for change from metric model to scalar model are CFI < .010, RMSEA < .015 and SRMR < .010 (Chen, 2007**)**. It is noted that two consecutive models can be considered not to significantly change if two out of the three fit indices meet the cut-off values (Putnick & Bornstein, 2016), suggesting retaining the more restricted model.

Concerning the comparison of teacher groups, our study delineated two distinct comparisons. Firstly, we categorized participants into three separate groups: student-teachers, primary school teachers, and secondary school teachers. Consequently, this classification yielded three pairs of comparisons: student-teachers versus primary school teachers, student-teachers versus secondary school teachers, and primary school teachers versus secondary school teachers(Jam et al., 2013). Secondly, we aggregated males from both student-teachers and professional teacher groups to create a consolidated group of male teachers. Conversely, females from both student-teachers and professional teacher groups were put together to form a unified group of female teachers.

Next, multiple hierarchical regression analysis was used to evaluate the associations between different aspects of teaching burnout (i.e., exhaustion, cynicism and professional efficacy) and teaching satisfaction. Two nested models were considered. In the first model, the variables of Age, Gender and Teacher groups (student-teachers and teachers) were put as the predictors and Teaching Satisfaction was put as the outcome (Model 1). In the second model, in addition to the variables considered in Model 1, the Exhaustion, Cynicism and Professional Efficacy variables were added (Model 2). Model comparison (Model 1 vs. Model 2) was performed to come to the most compelling model.

Finally, the CFA and measurement invariance analyses were performed using robust maximum likelihood estimation for the current data (Rosseel, 2012). The analyses of CFA and measurement invariance were conducted using the package *lavaan* (Rosseel, 2012). Sum score was calculated for all the study's variables of Exhaustion, Cynicism and Professional Efficacy. All the analyses were performed in RStudio enviroment.

RESULTS

Descriptive Analyse

The descriptive analyses conducted for the study variables revealed that there were no instances of missing data across all the measured variables, suggesting the integrity and completeness of the dataset. However, the skewness and Kurtosis values indicated that the data deviated from a normal distribution. Additionally, bivariate correlation analyses unveiled significant relationships among the study variables. More specifically, the results of the correlation analyses indicated significant positive correlations between Exhaustion and Cynicism, as well as between Professional Efficacy and Job satisfaction. Conversely, both Exhaustion and Cynicism exhibited a significant negative correlation with Professional Efficacy and Job satisfaction. Detailed statistical summaries are provided in Table 1.

Table 1. Descriptive Analyses and Correlation Analyses for the Main Study's Variable

	N	Mean (*SD*)	Min	Max	Range	Skew	Kurtosis	SE	1.	2.	3.	4.
1. Exhaustion	649	7.69 (6.03)	0	30	30	0.69	0.08	0.24	-	.73***	-.20***	-.41***
2. Cynicism	649	3.38 (4.27)	0	24	24	1.38	1.34	0.17		-	-.30***	-.39***
3. Professional Efficacy	649	24.89 (7.83)	0	36	36	-0.89	0.76	0.31			-	.31***
4. Job satisfaction	649	7.60 (2.18)	0	10	10	-1.14	1.13	0.09				-

Note: ***$p < .001$

Confirmatory Factor Analysis and Measurement Invariance Analysis

Confirmatory Factor Analysis was employed as the analytical approach to assess the validity of the proposed three-factor structure of the MBI. Results revealed that the three-factor structure of the MBI demonstrated

acceptable fit indices, indicating a good model fit (CFI = .909, RMSEA = .088, SRMR = .054). These results provide support for the appropriateness of the further use of the three-factor structure of the MBI in the present study.

Measurement invariance analysis was first conducted on teacher groups (student-teachers vs. primary school teachers vs. secondary school teachers). Results showed full scalar measurement invariance for the MBI across three teacher groups (student-teachers vs. primary school teachers vs. secondary school teachers), in which the group of primary school teachers was the reference group. More specifically, the configural model fit with the data (CFI = .904, RMSEA = .094, SRMR = .059) and the metric model did not significantly differ from the configural model (ΔCFI = .001, ΔRMSEA = .004, ΔSRMR = .003). Comparing the metric model and scalar model, we found the CFI changes equal to .021, which excessed the criterion of <.01. However, the scalar model could still be considered not to significantly differ from the metric model since two other criteria were still met (ΔRMSEA, ΔSRMR) (see more details in Table 2).

Secondly, measurement invariance analysis was conducted in gender group (males vs. females), in which the reference group was female teachers. Results showed full scalar measurement invariance for the MBI across genders. More specifically, the configural model fit with the data (CFI = .905, RMSEA = .095, SRMR = .056) and the metric model did not significantly differ from the configural model (ΔCFI = .001, ΔRMSEA = .003, ΔSRMR = .001). Comparing the metric model and scalar model, we also found the three criteria to be met (ΔCFI = .001, ΔRMSEA = .002, ΔSRMR = .000) (see more details in Table 2).

Different In Latent Means for Exhaustion, Cynicism, And Professional Efficacy Across Teacher Groups and Gender Groups

Latent Mean Differences Across Teacher Groups

In this comparison, the latent means of the Exhaustion, Cynicism and Professional Efficacy of the primary school teacher group were compared to the latent means of the corresponding scales of the secondary school teacher group and the student-teacher group. There was no significant in latent mean scores of the three factors between the primary school teacher group and the secondary school teacher group. Comparing the primary school teacher group and the student-teacher group, we found no significant difference in the Exhaustion, Cynicism across both groups, except for the Professional Efficacy, in which the student-teacher group significantly scored a lower latent mean score than the primary school teacher group.

Comparing the secondary school teacher group and the student-teacher group, we found significant differences concerning the Exhaustion and the Professional Efficacy, in which student-teacher groups significantly scored lower latent mean in the Exhaustion and in the Professional Efficacy. We found no significant difference across both groups concerning Cynicism.

Concerning gender group, we found no significant differences in latent mean scores between males and females for the three factors of Exhaustion, Cynicism and Professional Efficacy.

Table 2. Measurement Invariance Analysis Across Teacher Groups and Genders Groups

	Fit indices						Differences in latent mean		
	CFI	ΔCFI	RMSEA	ΔRMSEA	SRMR	ΔSRMR	Exhaustion	Cynicism	Professional Efficacy
Teacher groups									
Configural	.904		.094		.059				
Metric	.903	.001	.090	.004	.062	.003			
Scalar	.882	.021	.095	.005	.068	.006			
PrTC[a] vs. ScTC							0.087	0.042	-0.095
PrTC[a] vs. StTC							-0.115	0.035	-0.521***
ScTC[a] vs. StTC							-0.206+	-0.004	-0.437***
Genders groups[b]									
Configural	.905		.095		.056				
Metric	.904	.001	.092	.003	.057	.001			
Scalar	.903	.001	.090	.002	.057	.000	0.084	0.020	-0.005

Note. PrTC: Primary school teacher group; ScTC: Secondary school teacher group; StTC: Student-teacher group; [a]the reference group; [b]females are the reference group.

$^{+}p = .083$, $^{***}p < .001$

Multiple Hierarchical Regression Analysis

A multiple hierarchical regression analysis was conducted to investigate how each subscale of the MBI links to the measure of teaching satisfaction. The predictors of Model 1 were Age, Gender and Teacher all explained two percent of the variance in the Teaching satisfaction as the outcome. After adding three variables of Exhaustion, Cynicism and Professional Efficacy, the three variables explained an addition of 22 percent of variance in Teaching Satisfaction as the outcome (Model 2). Model comparison analysis shows that Model 2 was significantly better than Model 1 ($F(7, 641) = 30.04$, $p < .001$). As indicated in Table 3, Exhaustion and Cynicism significantly and uniquely negatively predicted Teaching Satisfaction. Whereas, Professional Efficacy significantly and uniquely positively predicted Teaching Satisfaction. More details can be consulted in Table 3.

Table 3. Multiple Hierarchical Regression Analysis for the Study Variable

	β	R^2	ΔR^2
Model 1		.02	
Age	.08		
Genders[a]	-.07^{+}		
ScTC	-.11		
PrTC	.03		
Model 2		.24	.22
Age	.09^{++}		
Genders	-.08*		
ScTC[b]	-.13*		
PrTC[b]	-.02		
Exhaustion	-.28***		
Cynicism	-.12*		
Professional Efficacy	.20***		

Note. [a]Males are the reference group; [b]Student-teachers are the reference group

$^{+}p = .06$. $^{++}p = .08$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

DISCUSSION

The goal of the present study was to examine the factor structure of the MBI in a sample of student-teachers and teachers. The present study also examined measurement invariance of the three-factor structure of the MBI across teacher groups (primary school teacher, secondary school teachers and student-teachers) and gender groups, which in turn enable the comparison of latent mean for different aspects of teaching burnout, including exhaustion, cynicism and professional efficacy from teaching across teacher groups (i.e., primary school teacher vs. secondary school teachers vs. student-teachers) and genders groups (i.e., males vs. females).

Concerning the factor structure, the findings of the current study showed that the three-factor structure of the MBI was supported by the current data, which is in line with prior studies which have also revealed the same findings (Gorter et al., 1999; Green & Walkey, 1988; Rechardsen & Martinussen, 2005; Taris et al., 1999). This suggests the feasibility of using the three-factor structure of this scale to measure different aspects of teaching burnout in different teacher groups (e.g., exhaustion, cynicism and professional efficacy), including teachers and student-teachers. Furthermore, the MBI has been revealed to be invariant across the teacher groups. This is important, given that the measurement invariance of the MBI across student-teachers and teachers has not been evaluated so far (Jam et al., 2013). Based on the established measurement invariance, from now on, it is possible to use the MBI to compare different aspects of teaching burnout across student-teachers and teachers.

Comparising teaching burnout across the teacher groups, we found that student-teachers considered that they experienced less exhaustion and less professional efficacy compared to secondary school teachers. Additionally, student-teachers experienced less professional efficacy than primary school teachers. It is widely accepted that in general student-teachers do not have a full range of responsibilities in the class, whereas teachers have to face diverse classroom situations, tasks and demands in their class. Additionally, student-teachers can get support and guidance from their mentors, which might result in reducing their feelings of exhaustion. However,

due to the lack of teaching experience, student-teachers perceived that they have less professional efficacy in teaching compared to professional teachers. These findings suggest that when entering teaching as a career, student-teachers are more likely to experience burnout. Therefore, it might be helpful if they are equipped with knowledge about teaching burnout and the skills needed to handle burnout in teaching when they are still following their teacher training program.

Concerning genders, the current study did not find gender effect on the experience of teaching burnout. The finding is not in line with prior research findings in which they found that gender does effect on the experience of teaching burnout. For example, prior research found that female primary teachers experience more teaching burnout than male primary teachers (Timms et al., 2006). These inconsistent findings might be due to some differences in the characteristics of the data sample. For example the data sample of Timms et al. (2006) was merely the professional teachers whereas the current data sample comprised of professional teachers and student-teachers. However, the finding provides an interesting case of gender role in predicting the experience of teaching burnout in different teacher groups, for example student-teachers and teachers.

For the link between different the three aspects of burnout and teaching satisfaction, the present study revealed that exhaustion and cynicism negatively predicted teaching satisfaction whereas professional efficacy positively predicted teaching satisfaction. The finding is consistent with those of previous studies on the predictive role of burnout in the development of teaching satisfaction (Skaalvik & Skaalvik, 2020). Therefore, the finding has added other impirical evidence to prove the assumption of the JD-R theory about the role of job demand in predicting job satisfaction in employees. Concerning the present study, it suggests exhaustion, cynicism and professional efficacy in teaching are the risk and protective factors of teaching satisfaction in both student-teachers and teachers.

LIMITATION AND FUTURE RESEARCH DIRECTIONS

Although the findings of the current study are based on relatively large data, the study still has some limitations. Firstly, the study was based on a cross-sectional design, which might make it difficult to show causal associations between teaching burnout and teaching satisfaction. Although the finding about the cross-sectional link was supported by prior longitudinal research, future longitudinal research about the link considering similar populations (student-teachers and teachers) could get more benefits in understanding the causal link. Secondly, the measure of teaching satisfaction was based on one item, which makes it difficult to cover different important aspects of teaching satisfaction. Although the single item helped provide a general estimation of teaching burnout in the participants, future research might consider involving a standardized measure of teaching satisfaction (e.g., Ho & Au, 2006), which helps understand how teaching burnout can link to different aspects of teaching satisfaction.

CONCLUSION

This study serves as a comprehensive exploration of burnout dynamics within the teacher population, confirming the robustness of the three-factor structure of the Maslach Burnout Inventory (MBI) and establishing its measurement invariance across a diverse array of subgroups. These subgroups encompassed both student-teachers and experienced educators, including primary and secondary school teachers, as well as individuals of different genders. Noteworthy among our findings is the discernible pattern indicating that student-teachers exhibited notably lower levels of burnout when compared to their professional counterparts. Specifically, while student-teachers reported reduced professional efficacy, they also demonstrated lower levels of exhaustion, thus highlighting a distinctive burnout profile within this subgroup. Moreover, our analyses revealed no discernible gender disparities in burnout levels, with both female and male teachers exhibiting similar patterns of exhaustion, cynicism, and professional efficacy. Crucially, our results emphasized the critical role played by exhaustion and cynicism as risk factors for teaching satisfaction, while professional efficacy emerged as a key protective factor. This underscores the importance of providing student-teachers with comprehensive coping mechanisms to effectively manage burnout during their training period, thereby bolstering their resilience and well-being as they embark on their future careers in education.

REFERENCES

Anderson, M. B. G., & Iwanicki, E. F. (1984). Teacher motivation and its relationship to burnout. Educational Administration Quarterly, 20(2), 109-132. https://doi.org/10.1177/0013161X84020002007

Bakker, A. B., & Demerouti, E. (2014). Job demands–resources theory. Wellbeing: A complete reference guide, (pp1-28). John Wiley & Sons. https://doi.org/10.1002/9781118539415.wbwell019

Brown, T. A. (2014). Confirmatory factor analysis for applied research. Guilford Publications.

Burn, K. (2007). Professional knowledge and identity in a contested discipline: challenges for student teachers and teacher educators. Oxford review of education, 33(4), 445-467. https://doi.org/10.1080/03054980701450886

Byrne, B. M. (2013). Structural equation modeling with Mplus: Basic concepts, applications, and programming. Routledge.

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. Structural Equation Modeling, 14(3), 464– 504. https://doi.org/10.1080/10705510701301834

Clark, S. K., Byrnes, D., & Sudweeks, R. R. (2015). A comparative examination of student teacher and intern perceptions of teaching ability at the preservice and inservice stages. Journal of Teacher Education, 66(2), 170-183. https://doi.org/10.1177/0022487114561659

Freudenberger, H. (1974). Staff burnout. Journal of Social Issues, 30(1), 159–165. https://doi.org/10.1111/j.1540-4560.1974.tb00706.x

Garcia-Arroyo, J. A., Osca Segovia, A., & Peiró, J. M. (2019). Meta-analytical review of teacher burnout across 36 societies: The role of national learning assessments and gender egalitarianism. Psychology & health, 34(6), 733-753. https://doi.org/10.1080/08870446.2019.1568013

Gorter, R. C., Albrecht, G., Hoogstraten, J., & Eijkman, M. A. (1999). Factorial validity of the Maslach burnout inventory—Dutch version (MBI-NL) among dentists. Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 20(2), 209-217. https://doi.org/10.1002/(SICI)1099-1379(199903)20:2<209::AID-JOB984>3.0.CO;2-Y

Green, D. E., & Walkey, F. H. (1988). A confirmation of the three-factor structure of the Maslach Burnout Inventory. Educational and Psychological Measurement, 48(3), 579-585. https://doi.org/10.1177/0013164488483

Giwanatara, G., & Hendrawan, D. (2021). Juridic review of legal protection for health personnel in radiology in relationship with legal assurance. Journal of Advances in Humanities and Social Sciences, 7(2), 59-63.

Han, J., Yin, H., Wang, J., & Zhang, J. (2020). Job demands and resources as antecedents of university teachers' exhaustion, engagement and job satisfaction. Educational Psychology, 40(3), 318-335. https://doi.org/10.1080/01443410.2019.1674249

Ho, C. L., & Au, W. T. (2006). Teaching satisfaction scale: Measuring job satisfaction of teachers. Educational and psychological Measurement, 66(1), 172-185. https://doi.org/10.1177/0013164405278573

Haider, S. F., Quazi, M. M., Bhatti, J., Bashir, M. N., & Ali, I. (2019). Effect of Shielded Metal Arc Welding (SMAW) parameters on mechanical properties of low-carbon, mild and stainless-steel welded joints: A review. Journal of Advances in Technology and Engineering Research, 5(5), 191-198.

Husain, H., Shaibur, M. R., & Al Muzahid, M. (2021). Economic efficiency of benapole port and socio-economic profiles in surrounding areas, Bangladesh: An analytical approach. Journal of Advances in Humanities and Social Sciences, 7(1), 28-37.

Jam, F. A., Mehmood, S., & Ahmad, Z. (2013). Time series model to forecast area of mangoes from Pakistan: An application of univariate ARIMA model. Acad. Contemp. Res, 2, 10-15.

Jamaludin, I. I., & You, H. W. (2019). Burnout in relation to gender, teaching experience, and educational level among educators. Education Research International, 2019. https://doi.org/10.1155/2019/7349135

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. Journal of Occupational Behavior, 2(2), 99–113. https://doi.org/10.1002/job.4030020205

Maslach, C., & Pines, A. (1977). The burn-out syndrome in the day care setting. Child care quarterly, 6(2), 100-113. https://doi.org/10.1007/BF01554696

Jam, F.A., Khan, T.I., Zaidi, B., & Muzaffar, S.M. (2011). Political Skills Moderates the Relationship between Perception of Organizational Politics and Job Outcomes.

Meredith, W. (1993). Measurement invariance, factor analysis and factorial invariance. Psychometrika, 58(4), 525–543. https://doi.org/10.1007/BF02294825

Nagar, K. (2012). Organizational commitment and job satisfaction among teachers during times of burnout. Vikalpa, 37(2), 43-60. https://doi.org/10.1177/02560909201202

Noor, N. M., & Zainuddin, M. (2011). Emotional labor and burnout among female teachers: Work–family conflict as mediator. Asian Journal of Social Psychology, 14(4), 283-293. https://doi.org/10.1111/j.1467-839X.2011.01349.x

Purvanova, R. K., & Muros, J. P. (2010). Gender differences in burnout: A meta-analysis. Journal of vocational behavior, 77(2), 168-185. https://doi.org/10.1016/j.jvb.2010.04.006

Putnick, D. L., & Bornstein, M. H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. Developmental Review, 41, 71–90. https://doi.org/10.1016/j.dr.2016.06.004

Khan, A. Z., Mirza, H. H., Khan, T. I., & Khan, M. M. (2020). Efficiency Analysis of Mudarabah and Leasing Firms in Pakistan. Journal of Islamic Business and Management, 10(2), 390-401.

Redondo-Flórez, L., Tornero-Aguilera, J. F., Ramos-Campo, D. J., & Clemente-Suárez, V. J. (2020). Gender differences in stress- and burnout-related factors of university professors. BioMed Research International, 2020. https://doi.org/10.1155/2020/6687358

Richardsen, A. M., & Martinussen, M. (2005). Factorial validity and consistency of the MBI-GS across occupational groups in Norway. International Journal of Stress Management, 12(3), 289. https://doi.org/10.1037/1072-5245.12.3.289

Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling [Version0.5–12 (BETA)]. Journal of Statistical Software, 48(2), 1–36. https://doi.org/10.18637/jss.v048.i02

Rumschlag, K. E. (2017). Teacher Burnout: A Quantitative Analysis of Emotional Exhaustion, Personal Accomplishment, and Depersonalization. International Management Review, 13(1), 22-36,101. https://www.proquest.com/scholarly-journals/teacher-burnout-quantitative-analysis-emotional/docview/1881414561/se-2

Schaufeli, W. B., Leiter, M. P., Maslach, C., & Jackson, S. E. (1996). Maslach Burnout Inventory–General Survey. In C. Maslach, S. E. Jackson, & M. P. Leiter (Eds.), The Maslach Burnout Inventory—Test manual (3rd ed.). Palo Alto, CA: Consulting Psychologists Press.

Jam, F. A., Akhtar, S., Haq, I. U., Ahmad-U-Rehman, M., & Hijazi, S. T. (2010). Impact of leader behavior on employee job stress: evidence from Pakistan. European Journal of Economics, Finance and Administrative Sciences, (21), 172-179.

Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. Journal of cross-cultural psychology, 33(5), 464-481. https://doi.org/10.1177/0022022102033005003

Skaalvik, E. M., & Skaalvik, S. (2020). Teacher burnout: relations between dimensions of burnout, perceived school context, job satisfaction and motivation for teaching. A longitudinal study. Teachers and Teaching, 26(7-8), 602-616. https://doi.org/10.1080/13540602.2021.1913404

So, H. J., & Kim, B. (2009). Learning about problem based learning: Student teachers integrating technology, pedagogy and content knowledge. Australasian Journal of educational technology, 25(1). https://doi.org/10.14742/ajet.1183

Taris, T. W., Schreurs, P. J., & Schaufeli, W. B. (1999). Construct validity of the Maslach Burnout Inventory-General Survey: A two-sample examination of its factor structure and correlates. Work & Stress, 13(3), 223-237. https://doi.org/10.1080/026783799296039

Timms, C., Graham, D., & Caltabiano, M. (2006). Genders implication of perceptions of trustworthiness of school administration and teacher burnout/job stress. Australian Journal of Social Issues, 41(3), 343-358. https://doi.org/10.1002/j.1839-4655.2006.tb00020.x

Vu, B. T., & Bosmans, G. (2021). Psychological impact of COVID-19 anxiety on learning burnout in Vietnamese students. School Psychology International, 42(5), 486-496. https://doi.org/10.1177/01430343211013875

Worly, B., Verbeck, N., Walker, C., & Clinchot, D. M. (2019). Burnout, perceived stress, and empathic concern: differences in female and male Millennial medical students. Psychology, health & medicine, 24(4), 429-438. https://doi.org/10.1080/13548506.2018.1529329