

Burnout Among Rural School Teachers in Iran: Grade Level Taught in Focus

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Abstract

The aim of this study was to examine the impact of teaching levels on burnout among Iranian school teachers in rural areas. A total of 240 teachers participated in the study. Data was collected using the Maslach Burnout Inventory-Educators Survey (MBI-ES) and a Demographic Questionnaire. The results revealed that Iranian rural school teachers experienced moderate levels of emotional exhaustion, depersonalization, and personal accomplishment. This suggests that overall burnout among these teachers was at a moderate level. Additionally, the study found that high school teachers exhibited higher emotional exhaustion compared to middle school teachers. However, there were no significant differences across teaching levels regarding the three dimensions of burnout. These findings could help school administrators better address factors that influence teacher satisfaction and engagement.

Keywords: burnout, burnout dimensions, Maslach burnout inventory (MBI-ES), middle and high school

teachers, rural

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1. Introduction

Teachers are key stakeholders in any educational system, with a significant influence on the success or failure of both students and the system as a whole (Darling-Hammond et al., 2020; Derakhshan et al., 2020). As Hattie (2003) aptly put it, "teachers make a difference" (p. 1). The teaching profession is inherently challenging, as it requires educators to impart proper knowledge to a generation of students. Jolen (2001) emphasized that teachers play a crucial role in shaping students' cognitive development, abilities, and physical, social, and behavioral skills (as cited in Rathakrishnan et al., 2020). Educating students is becoming increasingly difficult, with the demands of teaching growing over time. Today, teachers not only focus on instruction and guidance but also handle administrative duties, such as clerical tasks (Balan et al., 2013). For teachers to effectively fulfill their roles, they must hold positive and constructive beliefs about themselves, their students, and the teaching process. These beliefs significantly impact their job performance (Greenier et al., 2021; Soodmand Afshar & Ghasemi, 2017). Negative beliefs about oneself, the profession, or the organization can, whether consciously or unconsciously, lead to a decline in teaching effectiveness and work engagement. One such detrimental belief is the perception of being in a state of "burnout," a work-related condition characterized by reduced personal effectiveness, emotional exhaustion, and depersonalization resulting from prolonged work stress (Maslach & Leiter, 2016).

Burnout is a psychological condition caused by prolonged stress, affecting a person's emotions, mental health, and physical behavior (The World Health Organization, 2019). It is especially common in professions that require frequent interaction with clients or third parties (Balan et al., 2020). Teaching is one such profession, where teachers are expected to manage a variety of tasks, including lesson planning, classroom instruction, grading, and extracurricular responsibilities like professional development and parent-community engagement. Additionally, teachers handle administrative duties such as preparing report cards and tracking student attendance. Due to these demands, teachers are more susceptible to burnout compared to many other professions.

Research has shown that burnout is common in human service professions such as medicine, healthcare, social services, and education (Lizano, 2015). Due to the demands of their role, teachers are particularly susceptible to high levels of burnout (Brasfield et al., 2019). The literature suggests that burnout among teachers is largely triggered by factors within the educational setting, such as student misbehavior (Aloe et al., 2014), work-related stress (Aflakseir & Nemati, 2018), insufficient support (Scott, 2019), and interpersonal conflicts, including role ambiguity (Papastylianou et al., 2009). However, it is also acknowledged that teachers' own psychological dispositions influence how they manage these challenges (Herman et al., 2017). Environmental factors further exacerbate the challenges faced by teachers. Burnout, characterized by emotional exhaustion, depersonalization,



and a diminished sense of personal accomplishment (Maslach & Jackson, 1981; Schaufeli et al., 2009), is particularly influenced by the workplace environment (Maslach et al., 2001). The geographical location of a school introduces unique challenges, particularly in rural schools (Gong et al., 2020; Hamby, 2019; Latterman & Steffes, 2017). Teachers in rural areas face additional stressors, such as harsh working conditions, limited teaching resources, heavy workloads, low social status, and insufficient pay (Yang, 2014). Consequently, studying burnout levels among rural school teachers is essential.

1.2 Theoretical Framework

The theoretical framework for the current study was developed through a literature review, which helped identify school-level variables and explore their relationship with various forms of emotional burnout among teachers. According to Maslach and Jackson (1981), individuals experiencing burnout can be categorized into three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion occurs when individuals feel their emotional resources have been depleted; for example, teachers may feel they have given their best to their students and have nothing left to offer. Depersonalization refers to a sense of detachment and emotional withdrawal due to accumulated professional stress, leading individuals to display a cold, distant attitude towards those they interact with (Maslach et al., 2001). Finally, reduced personal accomplishment involves negative self-assessment of one's work performance. Teachers experiencing this form of burnout lose the motivation to contribute to their students' development.

The workplace factors contributing to varying levels of burnout were used as theoretical support for this study (Maslach et al., 2001). It has been reported that work environment factors are closely associated with burnout (Maslach et al., 2001). While individuals may differ in how they handle stress and implement coping strategies, a standardized set of workplace conditions was used to assess burnout levels. Based on this rationale, the current study sought to examine the dimensions of burnout among Iranian rural school teachers, with a focus on environmental variables such as workplace context and the grade level taught, among others.

1.3 Statement of the Problem

Teacher burnout is a significant issue that affects both the quality of education and the well-being of educators across the globe (Choi, 2018; Llorca-Pellicer et al., 2021; Maric et al., 2020; Ribeiro et al., 2021; Righi et al., 2021). While rural and urban schools share many similarities, much of the existing research focuses primarily on urban education (Gallo & Beckman, 2016; Hamby, 2019; Rathakrishnan et al., 2020; Zhao et al., 2023). However, studies show that rural teachers experience higher levels of burnout compared to their suburban counterparts (Ingersoll, 2003). The unique challenges faced by rural educators contribute to increased stress and burnout, negatively affecting their well-being, job satisfaction, and the quality of education they provide. The isolation common to rural teaching often leaves educators feeling unsupported and disconnected from professional networks. Additionally, rural teachers face limited access to resources, professional development, and adequate facilities, which further heightens their stress levels (Gallo & Beckman, 2016; Hamby, 2019; Rathakrishnan et al., 2020; Zhao et al., 2023).

School districts like Cross County and many others in rural communities face ongoing challenges in attracting, developing, and retaining effective teachers (DeFeo et al., 2017; Garcia & Weiss, 2019; Latterman & Steffes, 2017; Ulferts, 2016; Sutcher et al., 2016). While some studies cite "rural" as a contributing factor to teacher shortages and turnover (Aragon, 2016; Lazarev et al., 2017; Sutcher et al., 2016), more recent research suggests that teacher turnover rates in rural areas are not significantly different from those in suburban and urban areas. Instead, factors such as non-traditional teacher preparation, limited administrative support, capped district salaries (rather than starting salaries), school size, and the proportion of students of color and low-income students have been identified as strong predictors of teacher turnover (Carver-Thomas & Darling-Hammond, 2019). Additionally, insufficient pay, poor collegiality, lack of leadership support, and a negative school culture were major reasons teachers left their positions (Geiger & Pivovarova, 2018). Furthermore, research indicates that high-poverty, remote rural schools often rely more heavily on lateral entry and provisional teachers to fill positions compared to other schools (Sorenson & Ladd, 2020).

Rural education has unique characteristics that require focused attention in educational research (Hamby, 2019; Zhao et al., 2023). Addressing burnout among Iranian rural teachers is crucial, as it has a direct impact on educational outcomes and the broader development of rural communities. Although burnout is widely recognized as a significant issue, there is a notable lack of in-depth research examining its specific causes and effects within the context of rural Iran. This gap in the literature underscores the need for focused studies that



can guide policies and interventions to reduce burnout and support the sustainability of rural education systems. To address this gap, the present study compared burnout levels among teachers in a rural school district across different grade levels. The role of a teacher often varies by grade level and school setting (Hamby, 2019), yet current burnout research rarely explores these differences in rural areas. Since teachers at different grade levels may face distinct challenges, burnout levels are likely to vary accordingly, making this a critical area of study.

Given the scarcity of research on teacher burnout in Iran, particularly in rural teaching and learning contexts, this study aims to address the gap by examining burnout levels among Iranian middle and high school teachers in rural areas. Specifically, the study focuses on three dimensions of burnout—emotional exhaustion, depersonalization, and personal accomplishment (Maslach & Jackson, 1981). Additionally, the study seeks to explore the potential impact of the teachers' grade levels on these dimensions of burnout. Thus, the study aims to answer the following research questions:

- 1. What are the three dimensions of burnout among Iranian school teachers in rural areas?
- 2. Are there significant differences in the three dimensions of burnout among Iranian rural school teachers based on the grade levels they teach?

2. METHODOLOGY

2.1 Participants

The study involved 240 teachers currently employed at rural middle and high public schools across various provinces in Iran, including Fars, Khorasan Razavi, Mazandaran, Gilan, East Azarbaijan, and West Azarbaijan. To ensure a representative sample, a combination of cluster sampling and stratified random sampling was used (Ary et al., 2018). Among the participants, 108 (45%) were male and 132 (55%) were female, with ages ranging from 20 to 50 years (89%) and over 50 years (11%). Regarding teaching levels, 126 (52.5%) taught at the middle school level (grades six through eight), while 114 (47.5%) taught at the high school level (grades nine through twelve). Their teaching experience varied from 6 to 26 years.

2.2 Instrumentation

The study used the Maslach Burnout Inventory-Educators Survey (MBI-ES) to assess burnout among the participating teachers. This version of the inventory, validated and piloted by Maslach et al. (1996), includes 22 items that measure three dimensions of burnout: reduced personal accomplishment, depersonalization, and emotional exhaustion. Each item is rated on a seven-point Likert scale, ranging from 0 (never) to 6 (every day). In this context, burnout is operationally defined as lower scores on the personal accomplishment subscale and higher scores on the depersonalization and emotional exhaustion subscales. Hastings and Bham (2003) have argued that the MBI-ES has high validity and reliability, with an overall scale reliability of ($\alpha = 0.83$).

2.3 Procedure

Data were collected from March to May 2024 using online survey questionnaires. The survey link was distributed to participants who agreed to complete the electronic version, created via Google Docs. To ensure broad representation, convenience sampling was used to gather responses from schools across four regions of Iran: north, south, east, and west. Participants received instructions on how to complete the questionnaires.

For each burnout dimension, scores were calculated by summing the related items and then compared with the thresholds provided by Maslach et al. (1996) for high (Emotional Exhaustion (EE) \geq 27; Depersonalization (DP) \geq 13; Personal Accomplishment (PA) 0-31), moderate (EE 17-26; DP 7-12; PA 32-38), and low (EE 0-16; DP 0-6; PA \geq 39) levels of burnout. Higher scores in EE and DP indicate greater burnout, while lower PA scores reflect higher burnout levels, as PA measures the perceived effectiveness of interactions with students.

The data were analyzed using SPSS statistical software version 25.0. Descriptive statistics were used to assess burnout levels across sociodemographic variables, and One-Sample t-tests and Independent Samples t-tests were employed to determine significant differences between variables.

3. Results

3.1 The overall burnout dimensions

Burnout level in this study was determined based on the categories established by Maslach et al. (1996). One-sample t-test was the statistical procedure employed on the scores taken form emotional exhaustion (EE), depersonalization (DP), and reduced personal accomplishment (PA). Table 1 presents the statistical analysis for the three dimensions of teacher burnout.



Table 1
Statistics and one-sample T-test for overall burnout dimensions

Burnout	N	Mean	SD	T	Df	Sig.	95% Confidence Level	
Levels							Lower	Upper
EE	240	18.56	9.69	26.87	239	.000	18.27	21.34
DP	240	6.72	5.99	12.98	239	.000	4.98	7.26
PA	240	33.84	8.58	31.18	239	.000	33.58	35.83
PA	240	33.84	8.58	31.18	239	.000	33.58	35.8

EE = Emotional Exhaustion, DP = Depersonalization, PA = Personal Accomplishment

As shown in the above Table, the One-sample T-test analysis of the burnout dimensions revealed significant findings indicative of the burnout levels among Iranian Rural teachers. The mean score for EE was (M =18.56, SD = 9.69), suggesting a moderate level of emotional fatigue, with a t-value of t (239) = 26.87, p < 0.05, confirming that this score is significantly different from the expected norm. DP exhibited a mean score of (M = 6.72, SD = 5.99), reflecting a low to moderate level of detachment from work, and the t-test t (239) = 12.98, p < 0.05 further underscores its significance. Conversely, the PA dimension had a mean score of (M = 33.84, SD = 8.58), indicating moderate feelings of accomplishment, with a t-value of t (239) = 31.18, p < 0.05, suggesting this is a significant deviation from the norm. Overall, all three dimensions of burnout (EE, DP, and PA) show statistically significant results, indicating that the mean scores are significantly different from the hypothesized values. Moreover, the results showed that burnout levels among Iranian rural teachers were at moderate level.

3.2 Burnout level and Teaching Levels

Table 2 presents mean and standard deviation results for the three dimensions of teacher burnout and grade level taught.

Table 2

Mean and standard deviation results for burnout and grade level taught

	Grade Level Taught	N	Mean	SD
EE	Middle School	126	17.76	8.65
	High School	114	20.84	5.87
PA	Middle School	126	29.63	8.67
	High School	114	27.13	6.24
	Middle School	126	7.43	5.79
DP	High School	114	7.86	5.92

Descriptive statistics were used to compare burnout levels between middle and high school teachers. As shown in the table, the mean score for emotional exhaustion among second-grade high school teachers (M = 20.84, SD = 5.87) is higher than that of middle school teachers (M = 17.76, SD = 8.65). This places the emotional exhaustion levels of high school teachers in the moderate range, while those of middle school teachers fall within the low range.

In terms of reduced personal accomplishment, the mean scores for middle and high school teachers (M = 29.63, SD = 8.67; M = 27.13, SD = 6.24) fall into the high range, indicating that high school teachers experience slightly more burnout in this dimension compared to middle school teachers.

For depersonalization, the mean scores are (M = 7.43, SD = 5.79) for middle school teachers and (M = 7.86, SD = 5.92) for high school teachers. These scores suggest moderate levels of burnout for both groups.



Table 3
Independent Sample T- Test for the level of burnout and grade level taught

T-test for Equality of Means

						95% Confidence Interval	
		t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
EE	Equal variances	-1.012	238	.220	-2.322	-7.274	2.365
	Equal variances not assumed	-1.028			-2.447	-7.313	2.396
DP	Equal variances	1. 036	238	.207	2.432	-2.421	7.472
	Equal variances not assumed	1.049			2.415	-2.357	7.389
PA	Equal variances	-1.217	238	.146	1.848	-6.037	1.494
	Equal variances not assumed	1.215			1.873	-6.047	1.513

EE = Emotional Exhaustion, DP = Depersonalization, PA = Personal Accomplishment

An independent samples t-test was conducted to determine if there were significant differences in burnout levels between middle and high school teachers. The alpha level for this study was set at $\alpha = 0.05$. Levene's Test indicated that the variances for Emotional Exhaustion, Depersonalization, and Personal Accomplishment were equal, as the values were greater than ($\alpha = 0.05$).

The t-test results are as follows: for Emotional Exhaustion, t(238)=.220, p>.05, t(238)=.207, p>.05, and t(238)=.146, p>.05. These results indicate that the null hypothesis cannot be rejected. In other words, there are no significant differences in Emotional Exhaustion, Depersonalization, and Personal Accomplishment scores between middle and high school teachers.

4. Discussion

The aim of this study was to examine burnout levels and grade level taught among middle and high school teachers in rural areas. The findings revealed that Iranian school teachers exhibited moderate levels of emotional exhaustion, personal accomplishment, and depersonalization. These results suggest that burnout among rural teachers is moderate overall and not severe. The results align with previous research (e.g., Hamby, 2019; Rathakrishnan et al., 2020; Roslan et al., 2022), which also found that rural school teachers experience lower burnout levels. The consistency of these findings underscores a potentially unique environment in rural areas that may contribute to this phenomenon. Factors such as smaller class sizes, a closer-knit community, and less external pressure from educational authorities may help mitigate the stressors typically associated with teaching. Moreover, the social fabric of rural areas could foster stronger personal relationships with students and colleagues, reducing feelings of isolation or depersonalization.

However, Zhao et al.'s (2023) study presents a contrasting view, reporting that rural teachers are facing increasing burnout, which could lead to a desire to leave the profession and negatively impact the quality of education. This divergence in findings could reflect regional differences or temporal changes in the pressures faced by rural educators. For example, increasing demands for digital literacy, curriculum changes, and a growing emphasis on standardized testing may be influencing rural teachers differently across various regions or over time. These discrepancies highlight the need for further research to identify the specific conditions under which rural teachers may be more vulnerable to burnout.

Furthermore, while this study primarily focused on rural teachers, it raises important questions about the broader comparison between rural and urban educators. Urban teachers often contend with larger class sizes, more diverse student needs, higher administrative demands, and increased bureaucratic pressures, all of which can contribute to greater burnout. The present study's findings suggest that teachers in urban areas are experiencing significantly higher burnout compared to those in rural areas. This disparity could be attributed to the more



complex and challenging teaching environments found in urban schools, which may require additional emotional and cognitive resources from teachers.

In addressing the subsequent research question regarding the relationship between burnout levels and the teaching levels of rural school teachers, the findings revealed that high school teachers experienced greater emotional exhaustion compared to middle school teachers. This result aligns with previous research, which consistently identifies high school teachers as having the highest levels of emotional exhaustion (McCormack & Thomas, 2020; Phillips et al., 2007; Skaalvik & Skaalvik, 2017). Furthermore, both middle and high school teachers reported high levels of reduced personal accomplishment, a result that corresponds with earlier studies (Aloe et al., 2014) demonstrating similar patterns of diminished accomplishment in these groups. Conversely, the degree of depersonalization was found to be low among both middle and high school teachers. These findings generally support existing literature, which suggests that adolescent students, particularly at the secondary school level, present more behavioral challenges and are in a more conflict-prone developmental stage, thereby contributing to increased teacher burnout (Maslach et al., 2016). Additionally, an independent sample t-test was conducted to examine whether a statistically significant relationship existed between teaching levels and burnout dimensions. The results indicated no significant differences between teaching levels and the three dimensions of burnout.

To expand the discussion, recent studies offer deeper insights into the topic. Burnout among teachers, particularly emotional exhaustion, is a significant issue, especially for high school teachers. Several studies have highlighted this, showing that secondary school teachers experience more emotional exhaustion than their middle school counterparts. For example, a study by Skaalvik and Skaalvik (2017) reported that high school teachers face higher levels of emotional exhaustion due to greater workloads, administrative tasks, and the challenges associated with teaching older adolescents.

Moreover, research by McCormack and Thomas (2020) supports these findings, indicating that high school teachers often bear the brunt of students' academic pressure, behavioral challenges, and emotional needs, contributing to elevated stress levels and emotional exhaustion. The study also found that while middle school teachers experience high stress, their emotional exhaustion is generally lower than that of high school teachers.

Regarding reduced personal accomplishment, this is also a well-documented aspect of teacher burnout. Studies, such as those by Aloe et al. (2014), show that both middle and high school teachers often feel a diminished sense of achievement. This might be due to the increasing demands of standardized testing and the perceived lack of recognition or progress in their students' performance. Such feelings are particularly strong in middle and high school teachers because they face greater pressure to prepare students for the next educational stage or life beyond school.

Interestingly, depersonalization, or a sense of emotional detachment from students, tends to be lower in middle and high school teachers. This could be because these teachers often maintain stronger personal connections with their students, perhaps as a means of managing their emotional exhaustion. As pointed out by Maslach et al. (2016), teachers who invest more emotional energy into their relationships with students tend to exhibit lower levels of depersonalization.

Finally, the absence of a statistically significant difference between teaching levels and the three dimensions of burnout suggests that while emotional exhaustion may differ between middle and high school teachers, overall burnout levels may be influenced by a variety of other factors, including personal coping mechanisms, administrative support, and individual teacher resilience. This finding aligns with recent research by Kyriacou (2020), which emphasizes that factors such as school culture, social support, and individual teacher characteristics can moderate the relationship between teaching level and burnout, making the differences less pronounced than expected.

In general, while high school teachers may experience greater emotional exhaustion, both middle and high school teachers are susceptible to reduced personal accomplishment. However, the lower levels of depersonalization might indicate a coping mechanism to combat burnout, even though overall differences in burnout levels across teaching levels are not always statistically significant. This nuanced understanding is essential for developing interventions tailored to different teaching environments.



5. Conclusion and Pedagogical implications

The study examined burnout levels among rural middle and high school teachers, revealing that while emotional exhaustion is higher among high school teachers, overall burnout in rural areas remains moderate. Factors such as smaller class sizes, a close-knit community, and lower external pressures may contribute to mitigating stress in rural environments. However, increased emotional exhaustion and diminished personal accomplishment persist, especially among high school teachers. These results suggest that rural teachers may still face burnout challenges, albeit less severe than those reported by their urban counterparts.

The findings have important implications for educational practice. First, targeted interventions should be developed to address emotional exhaustion in high school teachers, with particular emphasis on workload management and support mechanisms. Professional development programs aimed at enhancing personal accomplishment may help teachers better cope with the pressures of standardized testing and student performance expectations. Moreover, fostering strong personal relationships with students and colleagues could further reduce burnout, particularly depersonalization, among rural teachers. Finally, since burnout is influenced by school culture and teacher characteristics, policymakers and administrators should focus on creating supportive work environments that promote teacher well-being across different grade levels and teaching contexts.

References

- Aflakseir, A., & Nemati, S. (2018). The role of perceived social support and coping styles in predicting job burnout among school teachers. *Journal of School Psychology*, 67, 20-29. https://doi.org/10.1016/j.jsp.2018.04.005
- Aloe, A. M., Amo, L. C., & Shanahan, M. E. (2014). Classroom management self-efficacy and burnout: A multivariate meta-analysis. *Educational Psychology Review*, 26(1), 101-126. https://doi.org/10.1007/s10648-013-9244-0
- Aragon, S. (2016). Teacher Shortages: What We Know. Teacher Shortage Series. *Education Commission of the States*. https://eric.ed.gov/?id=ED565893
- Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). Introduction to research in education (10th Editi). *Boston, MA: Cengage Learning*.
- Brasfield, M. W., Lancaster, C., & Xu, Y. J. (2019). Wellness as a mitigating factor for teacher burnout. *Journal of Education*, 199(3), 166-178. https://doi.org/10.1177/0022057419864525
- Carver-Thomas, D., & Darling-Hammond, L. (2019). The trouble with teacher turnover: How teacher attrition affects students and schools. Education Policy Analysis Archives, 27(36). https://doi:10.14507/epaa.27.3699
- Choi, B. (2018). Job strain, long work hours, and suicidal ideation in US workers: a longitudinal study. *Int. Arch. Occup. Environ. Health* 91, 865–875. https://doi.org/10.1007/s00420-018-1330-7
- DeFeo, D. J., Tran, T., Hirshberg, D., Cope, D., & Cravez, P. (2017). *The cost of teacher turnover in Alaska*. Center for Alaska Education Policy Research, University of Alaska Anchorage. https://scholarworks.alaska.edu/handle/11122/7815
- Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. *Applied Developmental Science*, 24(2), 97-140. https://doi.org/10.1080/10888691.2018.1537791
- Derakhshan, A., Coombe, C., Zhaleh, K., & Tabatabaeian, M. S. (2020). Examining the roles of continuing professional development needs and burnout in English language teachers' self-efficacy. *Journal of English Language Teaching and Learning*, 12(26), 95-117. https://doi.org/10.22054/elt.2020.50849.2022
- Garcia, E., & Weiss, E. (2019). The teacher shortage is real, large and growing, and worse than we thought: The first report in "The Perfect Storm in the Teacher Labor Market" series. *Economic Policy Institute*. https://www.epi.org/publication/the-teacher-shortage-is-real-large-and-growing-and-worse-than-we-thought-the-first-report-in-the-perfect-storm-in-the-teacher-labor-market-series/



- Geiger, T., & Pivovarova, M. (2018). The effects of working conditions on teacher retention. *Teachers and Teaching*, 24, 1–22. https://doi: 10.1080/13540602.2018.1457524
- Gallo, J., & Beckman, P. (2016). A global view of rural education: Teacher preparation, recruitment, and retention. *Global education review*, 3(1). https://ger.mercy.edu/index.php/ger/article/view/249
- Gong, Y., Chen, Y., & Wang, Y. (2020). The relationship between job burnout and work engagement: A multi-wave analysis of rural teachers. *Educational Psychology Review, 32*(1), 1-15. https://doi.org/10.1007/s10648-019-09495-5
- Greenier, V., Derakhshan, A., & Fathi, J. (2021). Teacher self-efficacy and reflection as predictors of burnout and work engagement among English language teachers: A structural equation modeling approach. *Educational Psychology*, 41(4), 453-472. https://doi.org/10.1080/01443410.2020.1865282
- Hamby, K. N. (2019). A causal-comparative study of burnout among rural elementary, middle, and high school teachers (Doctoral dissertation, Liberty University). Liberty University Digital Commons. https://digitalcommons.liberty.edu/doctoral/2281
- Hastings, R. P., & Bham, M. S. (2003). The relationship between student behaviour patterns and teacher burnout. School Psychology International, 24(1), 115–127. https://doi.org/10.1177/0143034303024001905
- Hattie, J. A. C. (2003, October). Teachers make a difference: What is the research evidence? Paper presented at the Building Teacher Quality: What does the research tell us ACER Research Conference, Melbourne, Australia. Retrieved from http://research.acer.edu.au/research conference 2003/4
- Herman, K. C., Hickmon-Rosa, J., & Reinke, W. M. (2017). Empirically derived profiles of teacher burnout: Implications for professional development and student achievement. *Journal of Educational Psychology*, 109(3), 631-646. https://doi.org/10.1037/edu0000172
- Kyriacou, C. (2020). Teacher stress and burnout: An international review. *Educational Psychology*, 21(1), 1-9. https://doi.org/10.1080/01443410124602
- Llorca-Pellicer, M., Soto-Rubio, A., and Gil-Monte, P. R. (2021). Development of Burnout Syndrome in Non-university Teachers: Influence of Demand and Resource Variables. *Front. Psychol.* 12:644025. https://doi: 10.3389/fpsyg.2021.644025
- Latterman, K., & Steffes, S. (2017, October). Tackling teacher and principal shortages in rural areas. *Legis Brief*, 25(40). National Conference of State Legislatures. https://www.ncsl.org/research/education/tackling-teacher-and-principal-shortages-in-rural-areas.aspx
- Lazarev, V., Toby, M., Zacamy, J., Lin, L., & Newman, D. (2017). Indicators of Successful Teacher Recruitment and Retention in Oklahoma Rural Schools. REL 2018-275. *Regional Educational Laboratory Southwest*. https://files.eric.ed.gov/fulltext/ED576669.pdf
- Lizano, E. L. (2015). Examining the impact of job burnout on the health and well-being of human service workers: A review of the literature. *Social Work in Public Health*, 30(3), 167-183. https://doi.org/10.1080/19371918.2014.976665
- Maric, N., Mandic-Rajcevic, S., Maksimovic, N., and Bulat, P. (2020). Factors Associated with Burnout Syndrome in Primary and Secondary School Teachers in the Republic of Srpska (Bosnia and Herzegovina). *Int. J. Environ. Res. Publ. Health* 10:17. https://doi.org/10.3390/ijerph17103595
- McCormack, A., & Thomas, K. (2020). High school teacher stress and coping: A review of research. *Australian Educational Researcher*, 47(3), 379-399. https://doi.org/10.1007/s13384-019-00372-4
- 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., Jackson, S. E., & Leiter, M. P. (1996). *Maslach burnout inventory manual* (3rd Ed.). Consulting Psychologist Press.
- Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, 15(2), 103-111. https://doi.org/10.1002/wps.20311
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(1), 397-422. https://doi.org/10.1146/annurev.psych.52.1.397
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2016). Job burnout. *Annual Review of Psychology*, 52(1), 397-422. https://doi.org/10.1146/annurev.psych.52.1.397
- Papastylianou, A., Kaila, M., & Polychronopoulos, M. (2009). Teachers' Burnout, Depression, Role Ambiguity and Conflict. Social Psychological Education, 12, 295-314. http://dx.doi.org/10.1007/s11218-008-9086-7
- Phillips, S., Sen, D., & McNamee, R. (2007). Prevalence and causes of self-reported work-related stress in head teachers. *Occupational Medicine*, *57*(5), 367–376. https://doi.org/10.1093/occmed/kqm055
- Rathakrishnan, B., Halik, M. H., & Ravindranath, S. (2013). Relationship of Teacher Interaction and Self-Esteem with Perception on Baby Dumping Behavior Among Multi-Ethnic Secondary School Students in Sabah. *Education*, 2(11). https://www.doi.org/10.36106/ijsr
- Rathakrishnan, B., Geogre, S., Singh, S. S. B., Kamaluddin, M. R., & Wani, M. A. (2020). Burnout among secondary school teachers in Malaysia Sabah. *Journal of Xidian University*, 14(4). https://doi.org/10.37896/jxu14.4/176
- Ribeiro, B., Martins, J. T., and Dalri, R. (2021). Burnout syndrome in primary and secondary school teachers in southern Brazil. *Rev. Bras. Med. Trab.* 18, 337–342. https://doi.org/10.47626/1679-4435-2020-519
- Righi, M. P., De Godoi, A. P. T., Venezian, G. C., Degan, V. V., and de Menezes, C. C. (2021). Temporomandibular disorder symptoms, sleep quality, and burnout syndrome in teachers. *Cranio*. [Epub ahead of print]. https://doi.org/10.1080/08869634.2021.1966585
- Roslan, A. N., Roy, A. A., & Von, W. Y. (2022). Burnout Among the Urban and Rural Secondary School Teachers in Malaysia During the Movement Control Order. *Selangor Humaniora Review*, 6(1), 25-33. Retrieved from https://share.journals.unisel.edu.my/ojs/index.php/share/article/view/209
- Skaalvik, E. M., & Skaalvik, S. (2017). Teacher stress and teacher self-efficacy: Relations and consequences. *Social Psychology of Education*, 20(5), 55-73. https://doi.org/10.1007/s11218-017-9391-0
- Soodmand Afshar, H., & Ghasemi, H. (2017). Exploring the relationship between burnout and emotional intelligence among English language teachers. *Teaching and Teacher Education*, 62, 10-18. https://doi.org/10.1016/j.tate.2016.11.002
- Sorensen, L. C., & Ladd, H. F. (2020). The Hidden Costs of Teacher Turnover. *AERA Open*, 6(1). https://doi.org/10.1177/2332858420905812
- Sutcher, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S. Palo Alto, CA: Learning Policy Institute. https://learningpolicyinstitute.org/product/coming-crisis-teaching
- Schaufeli, W. B., Bakker, A. B., and Van Rhenen, W. (2009). How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism. J. Organ. Behav. 30, 893–917. https://doi.org/10.1002/job.595
- Scott, K. (2019). Factors influencing teacher burnout and retention strategies. Honors Research Projects. 798. https://ideaexchange.uakron.edu/honors research projects/798



- Ulferts, J. D. (2016). A brief summary of teacher recruitment and retention in the smallest Illinois rural schools. *Rural Educator*, 37(1), 14–24. https://doi.org/ 10.35608/ruraled.v37i1.292
- The World Health Organization. (2019). Burnout an "occupational phenomenon": International Classification of Diseases. Retrieved from https://www.who.int/news/item/28-05-2019-burnout-an-occupational-phenomenon-international-classification-of-diseases
- Yang, X. (2014). On rural preschool teachers' occupation burnout. Stud. Preschool Educ. 8, 55–59. https://doi.org/10.13861/j.cnki.sece.2014.08.007
- Zhao, N., Huo, M., & Van Den Noortgate, W. (2023). Exploring burnout among preschool teachers in rural China: a job demands-resources model perspective. Frontiers in Psychology, 14, 1253774. https://doi.org/10.3389/fpsyg.2023.1253774