Psychological Distress and Associated Factors among Elementary School Teachers: A Cross-sectional Study

Running title: Teachers' psychological distress

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Abstract

Background: Teachers can face demanding and stressful working conditions. Classroom environments in elementary schools are dynamic and challenging, which can be mentally and emotionally exhausting for teachers. This study aimed to investigate the prevalence of psychological distress and identify associated factors among elementary school teachers.

Methods: This is an analytical, observational cross-sectional study. The participants consisted of 450 teachers selected using the cluster sampling method from elementary schools of Tabriz, Iran. Multiple regression analysis was performed to examine the associations between teachers' psychological distress and potential factors.

Results: The study found a significant proportion of participants (54.2%) experiencing psychological distress. Multiple regression analysis revealed age, sex, work experience, school type, family income status, teachers' efficacy, emotional labor and presenteeism were statistically associated with teachers' psychological distress.

Implications for school health policy, practice, and equity: To address teachers' psychological distress, schools need to adopt policies that promote teacher well-being and mental health support.

Conclusion: The high prevalence of psychological distress among elementary school teachers raises concerns and highlights the need for attention. Schools and administrators must provide teachers with the resources and support they need to succeed in their roles. Interventions targeting the identified associated factors must be planned to improve the mental health of elementary school teachers and enhance their overall performance.

Keywords: efficacy, labor, presenteeism, psychological distress, teacher

INTRODUCTION

Teaching is a crucial profession that requires individuals to have a high level of emotional and psychological well-being.[1] However, recent studies have highlighted that elementary school teachers are vulnerable to experiencing psychological distress.[2,3] According to a national study, approximately 27.4% of teachers in Iran exhibited psychiatric symptoms.[4] Another study found that elementary school teachers had the highest prevalence rate at 21%, while secondary school teachers had the lowest rate at 14.9%.[5] An earlier study reported that 33.5% of elementary teachers experienced high psychological distress. [6] This could be due to the demanding nature of the job, the lack of support from administrators, or the challenges of teaching in a multicultural environment.[4,5] However, there is a lack of adequate consideration of psychosocial factors and workplace factors affecting teachers' mental health in the Iranian schools.[6,7]

Mental Health of Teachers

The teaching profession is challenging, with extended working hours, heavy workloads, and emotional demands from the government, students, and parents.[8] Teachers are expected to provide quality education, create engaging lessons, and be available for their students.[3] They are also expected to keep up with changing educational standards, which requires them to stay up to date with the latest trends and technologies.[5] As a result of such high expectations, teachers are likely to experience psychological stress.[6] Besides their teaching responsibilities, teachers face a substantial workload of administrative tasks, such as program implementation and documentation.[9] The stress of long working hours can harm teachers' mental health, physical health,[5] and well-being.[10] Research has shown that increasing weekly working hours raises the risk of stress and burnout among teachers.[11] According to Kim et al., stress mindset predicts job turnover among teachers.[12] The findings of a recent meta-analysis also indicate that several factors related to teachers, schools, and the workforce were associated with teacher psychological

distress.[13] A high value placed on education outcomes results in excessive pressure on teachers and students.[14]

Mental Health and Self-Efficacy

Mental health is affected by several factors, with self-efficacy and social support playing significant roles in helping individuals cope with stressful and anxiety-provoking situations.[15] Individuals with higher levels of perceived efficacy tend to explore more job opportunities and experience tremendous success in their careers.[16] They are more motivated to achieve their personal goals and be productive at work, resulting in reduced work-related stress and improved mental health.[17] Perceived inefficacy contributes to depression, anxiety, psychological distress, and other emotional states in individuals.[18] Teacher with high levels of efficacy better engage in organizational planning and employ creative strategies to meet the needs of their students.[19]

Occupational and Cultural Factors and Mental Health

Occupational and cultural factors may also increase vulnerability to mental health issues,[20] including absenteeism,[21] early retirement due to disability,[22] and presenteeism, referred to as an ineffective presence at work.[23] A high prevalence of presenteeism has been observed in the education sector,[24] which is concerning teachers' crucial role in educating students. As part of their role as educators, teachers are responsible for promoting positive social and emotional behavior among students.[25] Ineffective presence can lead to classroom management challenges, ultimately affecting student learning outcomes.[23] Poor presence also can lead to a lack of focus, decreased engagement, and lower motivation.[26] As a result, students may not be able to reach their full potential in the classroom.[23]. According to Chaubey and Verma factors that affect absenteeism in the stress-related model include limited job variation and autonomy, poor person-job fit, and unsatisfactory relationships between superiors and subordinates.[27]

In addition, studies have shown that jobs involving high levels of emotional labor are particularly prone to psychological harm.[28] In these jobs, employees may have to express emotions different from their own;[29] for example, hide their feelings and display acceptable emotions.[30] Face-to-face communication with students and parents is an integral part of the teaching profession, requiring the careful management and expression of emotions. These situations can lead to significant tension and emotional exhaustion, particularly when dealing with students' challenging behaviors.[31] Teachers often express the need for more information and training to help them establish supportive relationships with students and manage some students' challenging behaviors.[32]

Furthermore, socio-demographic factors can also affect mental health. Teachers with low salaries, for example, are more likely to suffer from mental health issues. [33] Teachers' mental health can also be affected by the type of school they teach at, such as government or private.[34] In government schools, teachers have more stress than in private schools. In addition to fulfilling their teaching responsibilities, government teachers must also deal with challenges such as large class sizes and limited resources.[35,36]

The Influence of Teachers on Students' Mental Health: A Critical Link

The influence of teachers on students' mental health is just as important as its impact on students' academic performance.[37] Teachers play a vital role in shaping students' emotional symptoms, conduct issues, hyperactivity, inattention, peer relationships, and overall behavior.[38] However, studies showed that teachers who experience high levels of distress may become emotionally exhausted, leading to decreased motivation, job dissatisfaction, and even attrition from the profession.[39, 40] Moreover, teachers' psychological well-being can directly impacts the quality of education they provide to students.[37] It is, therefore, essential to create a psychologically safe

environment for teachers who work with vulnerable populations within the school setting.[41] Considering the extant literature on teachers' mental health and its impact on students' psychological wellbeing and academic performance,[42] this study aims to fill a gap in the literature by determining the prevalence of psychological distress and identify associated factors among elementary school teachers.

METHODS

Study design

We employed an analytical, observational cross-sectional design to investigate psychological distress and its associated factors among elementary school teachers. The study adhered to the STROBE (Strengthening the reporting of observational studies in epidemiology) guidelines for reporting.[43]

Setting

The target population for this study consisted of teachers working full-time in various elementary schools (government or private) in Tabriz, Iran. The teaching levels of elementary schools are divided to three level based on age cut-offs to ensure appropriate education for students at different stages of their development in Iran. These levels consist of: 1) Kindergarten level with age cut-off 5 years, 2) elementary level with age cut-off: 6 years, and 3) intermediate level with age cut-off 11 years. These age cut-offs are essential for determining the grade level and curriculum that students should follow. Public schools are free in Iran. Students attend school for fewer than five hours per day. The children do not receive nutrition, although free milk is sometimes distributed to them. Usually, schools have the minimum necessary facilities and equipment, such as laboratories and libraries. Unlike public schools, private schools charge tuition, and the school may provide better equipment and food according to tuition. The salaries of teachers in public

schools are higher than those in private schools. Public schools have more students than private schools. Teacher candidates must pass both a written test and an ethical interview before being hired by government schools. Nevertheless, employment in private schools is not as difficult.

Participants

Teachers who met the following criteria were invited to participate in the study: 1) employed as a teacher in an elementary school in Tabriz, 2) possessing a minimum of one year of work experience, and 3) self-reporting no history of psychiatric illness. A multi-stage cluster sampling method was used to select participants. Initially, three districts from five districts of the Tabriz education system were chosen using simple random sampling. In the next stage, we assigned random numbers to each elementary schools (regardless type of school) in Excel to calculate the randomization, and accordingly, the elementary schools were randomly selected from each of the previously identified districts. The teachers of each selected school were then selected by assigning random numbers to each teacher in Excel to calculate the randomization. Random sampling was continued until the intended sample size for the study was achieved (Figure 1). There were 20 teachers who returned questionnaires without completing them and so were excluded. The sampling was conducted from October 2022 to February 2023.

Measurement

The data were collected using researcher-developed socio-demographic and work-related questions, the General Health Questionnaire (GHQ),[44] the Ohio State Teacher Efficacy Scale (OSTES),[45] the Dutch Questionnaire for Emotional Labor (D-QEL),[46] and Stanford Presenteeism Scale (SPS-6).[47] All of the scales are free for public access.

For determining Socio-demographic and work-related characteristics, studies related to teachers' mental health were reviewed. Factors such as age and gender,[23] work experience, teaching level

and type of school[34] were included in the questionnaire. Additionally, participants were asked to report their family income status based on their evaluation of income and expenses as poor, fair, or good.

The GHQ consists of 12 items developed by Goldberg & William[44] to assess the severity of psychological distress over the past few weeks based on a 4-point Likert-type scale ranging from 0 (not at all) to 3 (more than usual). Goldberg and William recommended the binary method as the standard scoring method for case identification. In this method, the two least symptomatic answers are scored as 0, and the two most symptomatic answers are 1 (i.e., 0-0-1-1). The total GHQ-12 scores can range between 0 and 12, with a higher score indicating higher psychological distress. In Iran, according to the region and population of the study, two cut-off points of 3.7 and 4 have been commonly used for determining psychological distress.[48,49] In the present study, a cut-off point of 4 was employed to categorize participants as having or not having severe psychological distress. The instrument has proven cross-cultural validity, with internal reliability (measured by Cronbach's alpha coefficients) ranging between 0.85 and 0.93.[50,51] Cronbach's alpha coefficient in this study was 0.84, which is considered to be good.[52]

The OSTES was developed by Tschannen-Moran and Hoy[45] to assess a broad range of capabilities considered necessary for teachers. It consists of 24 items and three subscales of efficacy for classroom management, instructional strategies, and student engagement. Each subscale loads equally on eight items, and every item is measured on a 5-point scale ranging from 1 (cannot do at all) and 5 (can do a great deal). Scores on the OSTES range from 24 to 120, with higher scores indicating greater efficacy. According to the developers, the OSTES is useable across different contexts, educational levels, and subjects,[45] which makes it a general scale for measuring teacher efficacy. The internal consistency of the OSTES has been reported as good (0.84 to 0.94)

in different settings.[53, 54] In the current study, the Cronbach's alpha coefficient for the scale was found to be 0.89.

The D-QEL is a 13-item self-report questionnaire designed to measure four dimensions of emotional display at work: surface acting (five items), deep acting (three items), suppression (three items), and emotional consonance (two items). The questionnaire uses a five-point Likert scale, with one indicating never and five always. D-QEL scores range from 13 to 120, with higher scores indicating greater efficacy.[46] The internal consistency of the subscales ranges from 0.63 to 0.85, indicating acceptable to good reliability.[46,55] It also has good convergent, discriminant and criterion validity.[56] In the present study, the Cronbach's alpha coefficient for the questionnaire was 0.81.

The SPS-6 developed by Koopman et al. measures the process of managing feelings and expressions to fulfil the emotional demands of a job.[47] This scale consists of two dimensions 'completing work', which relates to physical aspects of a job, and 'avoiding distraction', which is related to psychological aspects, such as goal focus.[57] Scale items are rated on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Items 1, 3 and 4 are reverse-scored due to negative wording. The total score on the SPS-6 can range from 6 to 30, with higher scores indicating a greater ability to concentrate and complete, despite health problems. Participants in the study were asked to rate their working experiences over the previous month. Cronbach's alpha coefficients of the original scale [47] and the Persian version of the scale [58] were reported to be 0.82 and 0.77. Cronbach's alpha coefficient was 0.87 in this study.

Study size

To determine the sample size, we first conducted a pilot study with 30 eligible teachers. The data of these teachers were not used in the final analysis due to the available sampling methods. The data from this pilot study was entered into G Power software with a 95% Confidence Interval (CI),

power of 80%, α = 0.05, $\beta = 0.2$, $r = 0.26$, and the sample size was calculated to be 285 teachers. That number was multiplied by a design size of 1.5 (285*1.5=427.5), which is a correction factor used to adjust the required sample size for cluster sampling.[59] The obtained number was added to the ten percent probability of missing data (427.5+42.7=470.2). Therefore, the sample size was determined to be 470 teachers. With a response rate of 95.7%, 450 participants were included in the final sample.

Data Analysis

Data were analyzed using the Statistical Program for the Social Sciences (SPSS) version 23.0 for Windows. Descriptive statistics were computed for all variables including frequencies, means, and standard deviations (SD). Data on the GHQ, the OSTES, the D-QEL, and the SPS-6 were normally distributed with the skewness and kurtosis indices being within ± 2.[60] These variables were analyzed quantitatively and as a result, we used t-test to compare between these variables with two-state background variables such as gender (male and female) and ANOVA to compare between these variables with multi-state variables such as education. Also, Pearson's correlation coefficient was used to check the correlation between the above variables and quantitative background variables such as age. The Pearson correlation coefficient was employed to assess the relationship between psychological distress with emotional labor and presenteeism. Multiple linear regression analysis was performed to identify the predictors of psychological distress. All assumptions of linear regression analysis (linearity, normality and independence of error terms) and multicollinearity of independent variables using the variance inflation factor of tolerance were examined. Variables including age, gender, work experience, family income status, school type, teacher efficacy, emotional labor, and presenteeism were identified as having $p<0.05$ in the univariate analysis and entered into the multiple linear regression model. The independent

variables in this study were a mixture of continuous and categorical variables. In multiple regression analyses, the categorical variables with more than two groups were coded as "dummy variables". The Statistical significance for all tests was set at $p<0.05$.

RESULTS

Demographic characteristics

The mean age of the participants was 29.3 ± 7.6 years (R= 23-41); and they were mostly women (66.6%), with the mean work experience of 11.2 ± 3.7 years (R= 3-19). Other sample characteristics are presented in Table 1.

[Please insert Table 1 here]

Psychological distress by socio demographic variables and work-related characteristics

The results of Pearson correlation coefficient tests showed significant moderate negative correlations between teachers age and work experience, efficacy scores and psychological distress ($r = -0.3$; $p < 0.001$ and $r = -0.4$; $p < 0.001$, respectively). Teachers who were female (6.4 ± 1.7, p <0.001) were more likely to experience psychological distress. In addition, public school teachers (5.6 ± 1.7, p <0.001), and teachers who evaluated their family income status to be less than their expenditure (6.8 ± 1.6, p <0.001) were more likely to exhibit a higher level of psychological distress, as shown in Table 2.

[Please insert Table 2 here]

Association between psychological distress, teacher efficacy, emotional labor, and presenteeism

Of participants, 54.2% experienced psychological distress. The mean (SD) of the teacher efficacy scores was 46.3 ± 7.4 (R= 24-120, where higher scores indicate higher efficacy). The teachers' emotional labor and presenteeism scores had a mean of 45.3 ± 8.1 (R= 13-65, with higher scores

indicating higher emotional labor) and 8.1 ± 3.7 (R= 6-30, with higher scores indicating greater presenteeism), respectively (Table 3).

[Please insert Table 3 here]

The results of Pearson correlation coefficient tests showed significant moderate negative correlations between total teacher efficacy scores and psychological distress ($r = -0.45$; $p < 0.001$). The correlations between classroom management, instructional strategies, and student engagement with psychological distress were also moderate and negative and included $r = -0.42$ ($p < 0.001$), $r = -0.44$ ($p < 0.001$), and $r = -0.41$ ($p < 0.001$), respectively.

Regarding emotional labor, there was a statistically significant moderate positive correlation between teachers' emotional labor and psychological distress scores. The correlation coefficient for the total emotional labor was $r = 0.49$ ($p < 0.001$), and the correlations for the surface acting, deep acting, suppression, and emotional subscales were also moderate, including $r = 0.42$ ($p = 0.03$), $r = 0.46$ ($p = 0.01$), $r = 0.45$ ($p < 0.02$), and $r = 0.44$ ($p < 0.01$), respectively.

A statistically significant moderate positive correlation was also observed between presenteeism and psychological distress. The correlation coefficient for the total presenteeism was $r = 0.46$ ($p < 0.001$), completing work had a correlation coefficient of $r = 0.44$ ($p < 0.001$), and deep acting had a correlation coefficient of $r = 0.42$ ($p < 0.001$). These results are summarized in Table 4.

[Please insert Table 4 here]

Predictor factors of psychological distress based on the multiple linear regression analysis

Variables with $p<0.05$ in univariate analysis were entered into the multiple linear regression model (age, gender, family income status, work experience in years, types of schools, self-efficacy, emotional labor, and presenteeism) and their relationship with psychological distress, while controlling for the effect of other variables, was determined. The results of multiple linear

regression analysis showed that considering the confounding variables, the relationship between the psychological distress score and the self-efficacy score was significant (β= -3.621, P<0.001) (Table 5). Based on this result, with a one-point increase in the teacher's self-efficacy score, their psychological distress score decreased by 3.621. Furthermore, with a one-point increase in the teacher's emotional labor and presenteeism scores, their psychological distress scores increased by 4.472 (P<0.001) and 4.654 (P<0.001), respectively. Female teachers (vs. male) had a higher psychological distress score (β=3.264; P=0.031).

Regarding age, teachers who were younger than 35 years had higher psychological distress scores than older teachers (β=-3.491; P=0.017). Those who worked in government schools (vs. those who worked in private) had a higher psychological distress score (β= 4.731; P<0.001). There was a higher psychological distress score among teachers with less than ten years of work experience (β=-3.461; P<0.001). Also, teachers whose family income status was less than expenditure had a higher psychological distress score than other teachers (β= -4.512, P<0.001). The model's goodness-of-fit was evaluated using the Adjusted R-squared statistic. The results revealed that the included independent variables could explain 29.1% of teachers' psychological distress variance (Table 5).

[Please insert Table 5 here]

DISCUSSION

This study assessed the prevalence of psychological distress and its association with teachers' efficacy, emotional labor, presenteeism and their demographic and work-related factors among elementary school teachers. To our knowledge, this is the first study evaluating psychological distress and its related factors in Iran. The results showed that a high proportion of elementary school teachers suffered from mental health symptoms. The finding raises concerns and highlights

the need for attention. Schools and administrators must provide teachers with the resources and support they need to succeed in their roles. Capone and Petrillo argued that elementary school children generally have lower social skills and are unprepared to comply with classroom discipline.[61] Elementary school teachers face a large number of challenges in meeting the learning needs, social needs, and in some cases health needs of their students.[62] Psychological distress may be caused by failure to meet these needs. Teachers also may experience psychological harm if they perceive that they do not have control over their students' misbehaviors.[63] Therefore, it is important that teachers' curriculum must include self-care skills training, interpersonal skill development, stress management, and resilience skills to prepare them for their work better. Additionally, elementary school teachers in Iran experience distress primarily due to a lack of instructional resources, incentives, and administrative support. [6,7] According to studies, these factors negatively affect the mental health of teachers,[5] students,[14] and the quality of their relationships.[19] Therefore, it seems necessary to improve elementary teachers' work conditions. Administrative support plays a crucial role in reducing teacher distress by providing guidance, mentorship, and clear communication channels.[7] When teachers have access to supportive administrators who understand their needs and advocate for them, they can feel empowered and more equipped to overcome challenges in the classroom.[6]

In the current study, more than half of the teachers reported experiencing psychological distress, which is similar to the rate of 69.9% reported by Ozoemena et al. among 264 elementary teachers who worked in elementary schools in Nigeria.[63] However, studies conducted in Germany [64] and Peru [65] reported lower rates of psychological distress among teachers, with only 40.4% and 40% of elementary teachers experiencing it, respectively. Findings of a cohort study also showed that between 19% and 29% of elementary teachers experienced clinically significant distress at each

time-point.[66] The difference in the rates may reflect cross-cultural factors and differences in psychological responses to their working conditions. Furthermore, the sample for this study was taken immediately following the reopening of schools closed for health protocol reasons, which may have affected the respondents' mental health. Improved work conditions can promote teachers' satisfaction and motivation, leading to better classroom performance,[10] enriched learning experience, and psychological well-being for teachers and students.[19]

In the current study, teachers' efficacy scores were lower compared to other studies [15, 19] which could be attributed to their relatively young age and lower work experience. Approximately half of the teachers in this study were younger than 35 years and had less than ten years of teaching experience. Teachers with less experience may exhibit lower confidence in effectively imparting knowledge to their students.[17] Furthermore, we found a negative relationship between teacher efficacy scores (across all dimensions) and psychological distress, aligning with the broader literature. Savas et al. demonstrated that teachers with low efficacy are more likely to experience psychological distress due to their challenges in effectively engaging students in learning activities.[67] Conversely, effective classroom management facilitates teacher-student interaction, leading to improved student feedback and emotional fulfillment.[19] Teachers with low efficacy report lower job satisfaction, lower satisfaction of life, and poorer mental well-being compared to teachers with higher efficacy.[67] Generally, teachers with higher efficacy are better equipped to handle challenging situations, exhibit confidence in tackling complex tasks, and maintain a positive attitude toward their work, contributing to their psychological well-being.[17]

In addition, the participants' emotional labor scores were higher than those reported in prior studies.[30, 68] de Ruiter et al. found that most teachers expressed deep and naturally-felt emotions, while surface acting was the least prevalent.[62] In some ways, emotional labor behavior indicates

how employees perform their occupational roles.[27] Teachers may have internalized these roles due to their high levels of deep-acting and naturally-felt emotions. Professionalism is demonstrated by teachers' use of such behaviors.[30] Bodenheimer and Shuster claimed that elementary school teachers face a trickledown effect by focusing more on exam results, resulting in increased emotional labor to balance affective neutrality and pastoral care for students.[56] Therefore, teachers often engage in emotional labor to comply with their emotional-display rules and consider this to build positive relationships with students and achieve their teaching goals.[30]

The study revealed that an increased level of emotional labor among participants was associated with increased levels of psychological distress, a finding that aligns with previous research. According to Zhang et al. teachers' mental health is closely related to their surface-acting behaviors.[31] Surface acting, which is pretending an emotion through words and body language, even when that emotion is not felt at that moment, has been shown to lead to psychological distress.[53] When expressing emotions are part of a job, employees are expected to control their true feelings and express those that the organization demands.[27, 28] Therefore, the constant emotional engagement required in their profession can lead to psychological distress and other mental health challenges.[29]

Compared to a similar study by Ibrahim et al. about teachers' psychological well-being, [22] presenteeism was also high in our study. It could be explained that teachers are often inclined to be absent from work due to the nature of their work and their human-teacher posture,[21] or they may fear losing their job.[23] In addition, presenteeism was a strong predictor of the teachers' psychological distress in the current study, a finding that is consistent with previous studies.[69, 70] It has been shown to be an early indicator of future psychological disorders.[23] Poor well-being and depressive symptoms have been linked to teachers' self-rated presenteeism.[71] Coming to work

while ill is detrimental to the teacher's performance and can negatively impact students' mental health, as the teacher may not establish positive and supportive relationships with students and manage the classroom effectively.[22]

Furthermore, in the current study, individual factors (age and gender) and work-related factors (work experience, family income status, and school type) remained statistically significant predictors of psychological distress. These findings are mainly consistent with the broader literature. Female teachers exhibit higher mental health issues than male teachers. [58] It may be related to the overall higher susceptibility of females to mental health issues, [71] which was also evident in the era of the COVID-19 pandemic.[72] Additionally, women are often primary responsibility for housework, childcare, and caring for a sick family member, which adds to their psychological burden.[73]

Similar to our finding, Ozoemena et al, found that there was a decrease in psychological distress as teachers age.[63] Young teachers often lack adequate work experience.[14] and resources to help them cope with the demands of teaching, such as constantly adjusting to new pedagogical approaches [74] or dealing with children's disruptive behavior.[62] As individuals age, they gain the necessary skills and work experience, and their working condition improves, helping them better cope with stressors.[75] In addition, teachers benefit from the positive relationships formed with students and parents over the years, leading to increased job satisfaction and a feeling of purpose and connection with the community.[76] On the other hand, studies show that many teachers leave their profession within the five years post-entry into the profession.[40] This may partially explain the difference in the teachers' distress level as they ages; the psychological distress level of older teachers may be different than their original cohort due to attrition of the most distressed young

teachers. Hence, providing young teachers with regular in-services and mentorship support may nurture improved adaptability to teaching-related stressors.[18]

We also found that less years of work experience was associated with higher levels of psychological distress compared with those with a high work experience, a finding that aligns with previous research.[77] Teachers with low work experience often lack the necessary support and guidance from experienced colleagues.[15] This lack of mentorship can contribute to feelings of isolation, lack of professional growth, and a sense of inadequacy.[25] Furthermore, new teachers may lack confidence in their abilities, particularly when compared to more experienced teachers. The lack of confidence can lead to self-doubt, self-criticism, and a negative perception of oneself as a teacher.[63] These feelings of inadequacy can manifest as psychological distress, impacting one's ability to perform effectively in the classroom.[62]

In our study, teachers with low income were more likely to have high psychological distress, a finding that is consistent with most previous research.[36] In addition, public school teachers were more likely to experience psychological distress than private school teachers, which supports the previous finding and aligns with past research.[33, 76] It may be related to their lower income, higher workload due to crowded classes, and poorer resources which can impede effective teaching and learning.[34] In public schools, teachers are more likely to work with students with more significant needs and challenging circumstances, which is addicting to teachers' workload and mental health issues.[35] Additional administrative tasks and reporting requirements imposed by government agencies may burden them more.[9]

Limitations

The use of a large sample size and a multi-stage cluster sampling method greatly enhances the representativeness of the sample and, consequently, the generalizability of the results. However, it

is essential to note that the selection of teachers in this study was based on convenience sampling, which introduces limitations to the generalizability of the findings. Furthermore, it is crucial to consider the limitations of cross-sectional studies when interpreting the results. Such studies cannot establish causal relationships between variables and are susceptible to recall and reporting bias.[78] Nevertheless, the results of this study align closely with previous research, which strengthens the evidence base and provides a foundation for designing interventions and programs aimed at improving the mental health of elementary school teachers. Longitudinal studies or randomized controlled trials are warranted to gain a deeper understanding of the association between teacher mental health and its underlying factors. These studies can shed further light on the extent to which various factors contribute to teacher mental health. Although this study sampled during the post-COVID-19 pandemic era, its possible effects weren't examined. The pandemic may have had an effect on the study's results, such as increased stress levels, lack of access to resources, and changes in social behavior. Future studies should look into these factors to more accurately assess the study's results.

Implications for School Health Policy, Practice, and Equity

Teachers' mental health can significantly influence the overall classroom climate, which directly affects students' learning experiences. Teachers who are mentally healthy are more likely to build positive relationships with their students, fostering trust, and open communication. Conversely, poor mental health can lead to reduced motivation, decreased productivity, and difficulties in managing classroom activities, ultimately affecting the quality of instruction and students' learning outcomes. Based on the high prevalence of psychological distress found in the current study, it seems important for schools to recognize the prevalence and impact of mental health problems among teachers. The study found a variety of variables impacted teachers' psychological distress;

accordingly, to address teacher psychological distress, schools need to adopt policies that promote teacher well-being and mental health support. This includes creating a positive work environment that fosters collaboration, support, and recognition for teachers. Implementing stress management programs (specially for female and young teachers), providing access to counseling services, and offering professional development opportunities focused on mental health and well-being can go a long way in supporting teachers' mental health. Additionally, school health policies should address the factors that contribute to teacher psychological distress. Excessive workload, lack of resources, and challenging student behaviors are common stressors for teachers. Schools can implement strategies to address these issues, such as ensuring reasonable workloads, providing adequate resources, and offering behavior management training to teachers.

Additionally, high levels of emotional labor and presenteeism can lead to psychological distress, which can ultimately result in decreased job satisfaction, increased absenteeism, and higher turnover rates among teachers. Therefore, implementing comprehensive mental health support programs for teachers is crucial. This can include access to counseling services, stress management workshops, and professional development opportunities focusing on self-care and well-being. By prioritizing teachers' mental health, policymakers can ensure that educators receive the necessary support to enhance their own well-being and, in turn, positively influence students' outcomes. Additionally, school health policies should address the factors that contribute to teacher psychological distress. Excessive workload, lack of resources, and low perceived efficacy in managing classrooms are common stressors for teachers.

Conclusion

The study findings indicate a significant prevalence of psychological distress among elementary school teachers. Specifically, the study highlights that younger age, female gender, employment

in public schools, less work experience, inadequate income, low teacher efficacy, and higher emotional labor and presenteeism are associated with a higher likelihood of experiencing psychological distress among teachers.

Given these results, implementing preventive measures and mental health interventions to reduce psychological distress among teachers can play a crucial role in preventing psychological disorders among teachers. It is recommended that teachers' training curricula incorporate the development of interpersonal skills and stress management abilities to better equip teachers for their profession and enhance their overall well-being. By addressing these areas, interventions can promote mental health and resilience among teachers.

By understanding the relationship between socio-demographic and work-related variables and teachers' psychological distress, researchers can gain insights into what factors affect elementary teachers' mental health. This knowledge can inform the development of interventions and support systems to improve teachers' psychological wellbeing. This will benefit both healthcare professionals and the students they teach. Thus, this study aimed to investigate psychological distress in teachers of elementary schools and its related factors.

Human Subjects Approval Statement

The study received approval from the Vice-Chancellor for Research and the Ethics Committee of Tabriz University of Medical Sciences (the code IR.TBZMED.REC.1399.603), ensuring adherence to ethical guidelines. Prior to their participation in the study, research participants were provided with a comprehensive explanation of the research objectives, assured of their anonymity, and informed about the voluntary nature of their participation. All participants signed a written informed consent form before taking part in the study. The research process adhered to the

principles outlined in the Helsinki Declaration to safeguard the rights and welfare of the research participants throughout the research process.

Conflict of Interest Disclosure Statement

The authors declare no conflicts of interests.

Authors' Contributions

FR has contributed to the conception, design, data analysis, manuscript preparation, editing, and review. FR, RNS, and MH have made contributions to the conception, design, acquisition, analysis, and interpretation of data and prepared the first draft. LG and EA acted as the critical reader of the manuscript. All Authors have read and approved the final manuscript.

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