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What Do Teachers Know About Student Burnout Symptoms During the COVID-19 Pandemic?

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Abstract

Research Objectives and Problems: The aim of this article is to analyze the phenomenon of student burnout in the context of the COVID-19 pandemic and examine the extent to which teachers can recognize burnout symptoms in students. The study considers both teachers' and parents' perspectives, highlighting discrepancies in their identification of symptoms.

Research Methods: The study utilized the Perceived School Burnout (PSB) scale and the e-Learning Burnout Scale (E-SBS) to collect data from teachers, parents, and students. Statistical analysis focused on correlations between teachers' assessments and students' subjective experiences of burnout.

Structure of the Article: The article begins with a discussion of the theoretical foundations of school burnout and the role of teachers in identifying students' problems. This is followed by a presentation of research methods,

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an analysis of results, and a discussion of the pandemic's impact on exacerbated student burnout.

Research Findings and their Influence on Pedagogical Science: Findings reveal significant differences in how teachers and parents perceive symptoms of burnout. Teachers often fail to detect symptoms, which may delay interventions for students' problems. The study underscores the need for better teacher education in recognizing the early signs of school burnout.

Conclusion and/or recommendations: The findings reveal the importance of introducing comprehensive training in schools to help teachers identify early signs of school burnout and intervene effectively. In light of the data, preventive measures should cover students, teachers, and parents.

***Keywords*:** student burnout, parents' and teachers' perceptions of students' burnout symptoms, COVID-19 pandemic

Introduction

The importance of teachers for the proper educational and mental functioning of young people is unquestionable. Among many professions, the role of the teacher stands out as requiring not only professional qualifications and competencies but also continuous personal growth and self-improvement. Teachers, as mature individuals, must possess a strongly developed sense of self-actualization (Maslow, 1986), which involves embracing and accepting the process of personal development and the resulting continuous change (Rogers, 1983). According to these theories, a teacher will develop at their own pace, according to their unique abilities, thereby expanding their sphere of influence on those around them (Kohlberg & Meyer, 1990).

Today, the role of the teacher is increasingly complex and difficult to define (Remża, 2021). It demands more than was previously expected and necessitates a redefinition of the professional role and, consequently, professional identity. For example, the social and emotional learning model (SEL) highlights the capacity of teachers to effectively guide educational

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instruction and manage classroom behaviors, which, in turn, influence key student outcomes such as performance and motivation (Madigan & Kim, 2021).

Szułczyński (2021) points out that a teacher's role now extends beyond developing skills in students to being open and empathetic. This means that pupils, parents, and teachers should interact as equals on a human level. The personal relationship between teacher and student is particularly important, as the teacher bears considerable responsibility for shaping the student's future role in society. In other words, effectively fulfilling the professional role of a teacher relies on developing interpersonal skills and applying them in the educational process (Kwiatkowski, 2018). The above postulates underscore the need to consider teachers' perspectives on students' mental health issues as a component of their professional responsibilities.

Student burnout is a psychological syndrome characterized by exhaustion, cynicism, and inefficiency, with adverse effects that may manifest as long-term impairments in students' mental, social, and educational functioning (Tomaszek & Muchacka-Cymerman, 2022). Numerous internal and external factors contribute to school burnout, with chronic academic stress considered the direct cause of its development (Ang & Huan, 2006). Students who experience stress often have high self-imposed expectations or face excessive demands from their immediate environment, such as parents or teachers. Moreover, Piekarska (2000) found that student stress is related to teaching methods and the way teachers evaluate student performance.

Yang et al. (2023) found that burned-out students report reduced autonomy support from teachers, especially in environments where criticism is prevalent, independent thinking is discouraged, and learning is perceived as purposeless. Additionally, stress and monotony contribute to disengagement and boredom at school (Barska, 2012). Many young people criticize schooling for its focus on rigid standards and behaviors while neglecting guidance on learning itself or the benefits of education (Barska, 2012). Grygiel (2015) revealed that Polish students often endure an overwhelming workload, balancing long hours at school with homework and tutoring, which leads to exhaustion.

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The findings by Masluk et al. (2022) identified a link between maladjustments in teacher-student relationships and negative teacher experiences, including workplace violence and complaints about their work. Teachers frequently report emotions such as discomfort, tension, anxiety, and pressure in the classroom. Furthermore, low self-efficacy and high demands have been linked to teacher burnout (Arvidsson et al., 2019), which often results in reduced empathy for students and diminished understanding of their educational problems.

Current Study

This study sought to address five research questions:

1. What are the psychometric properties of the PSB scale?

We hypothesized a three-dimensional structure for the perceived student burnout construct, based on Maslach's classical theory of burnout (Maslach & Leiter, 2016), and its application to educational settings by Salmela-Aro et al. (2009).

2. Do parents and teachers differ in their recognition of burnout symptoms? Do parents and teachers pay attention to different aspects of student burnout?

To our knowledge, no prior studies have explored the perspectives of adolescents, teachers, and parents on student burnout. However, based on findings by Nguyen et al. (2013), which revealed differences between the perspectives of teachers, parents, and youths on mental health problems, we hypothesized that teachers and parents would diverge in detecting symptoms of burnout. Specifically, we anticipated that teachers would pay more attention to symptoms related to learning activities, such as a lack of interest or engagement during online classes, whereas parents would focus on emotional symptoms and

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self-critical judgments expressed by their children regarding the learning process.

3. Do parents and teachers differ in their evaluations of changes in school performance and the need for control over students during the COVID-19 pandemic?

We hypothesized that, compared to teachers, parents would report poorer school performance and a greater need for control over students due to the COVID-19 pandemic. We formulated this hypothesis based on findings indicating that parents' perceptions of online learning changed during the pandemic. Specifically, parents more frequently reported that the material provided by teachers was difficult for their children to understand and expressed heightened awareness of the educational demands placed on students (Erlina et al., 2020). Furthermore, the pandemic crisis led to homeschooling-related stress and worry as dominant emotions experienced by parents, often stemming from a lack of preparedness and unfamiliarity with the process of distance education (Rousoulioti et al., 2022).

4. Do changes in school performance and the need for control over students caused by the COVID-19 pandemic correlate with perceived burnout symptoms?

A vast body of literature has established the negative impact of school burnout on academic achievement and school performance (Özhan & Yüksel, 2021). Furthermore, some researchers have confirmed the importance of parental educational support during remote learning and the difficulties parents faced due to limited knowledge and inadequate skills in using digital technologies (Daniela et al., 2022). Based on these findings, we hypothesized that lower school performance and a greater need for control over the learning process would correlate with higher levels of perceived school burnout.

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5. Do parents' and teachers' judgments about student burnout symptoms correlate with students' subjective experiences of e-learning burnout?

During the COVID-19 lockdowns, parents had to act as homeschooling tutors, while teachers had to navigate a range of alternatives to traditional distance education. As key stakeholders in the education system, parents' and teachers' observations of children's school performance can be considered key indicators for assessing students'academic difficulties. From an ecological perspective, interactions between a child and their main socializing environment (family) contribute positively to educational and socio-emotional development. For example, parents' involvement in schooling has been shown to positively influence children's academic outcomes (Lara & Saracostti, 2019).

Consequently, we hypothesized that perceived educational difficulties, including school burnout, would positively correlate with the subjective experience of e-learning burnout reported by students.

Materials & Methods

Study Procedure and Participants

The study was conducted between April 16 and May 30, 2021, using the Google Forms application. Twelve elementary and high schools located in different regions of Poland agreed to participate. Parents and students were invited to complete the survey via school emails. Data for the Perceived Student Burnout (PSB) scale comprised 104 observations collected from 34 parents and 8 teachers.

Adult participants also answered three questions assessing: (1) the perceived need for greater control due to the online format of classes; (2) student school performance before the outbreak of the COVID-19 pandemic; and (3) student school performance during the pandemic. The parents' sample consisted of 34 participants aged 31 to 63 years (Mage = 43.77 years; SD = 6.86 years), predominantly mothers (29 mothers, 5 fathers). Among

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these parents, 47% (n = 16) had a university degree, 47% (n = 16) had graduated from high school or vocational school, and 6% (n = 2) had completed primary school.

The teachers' sample included six primary school teachers, one vocational school teacher, and one high school teacher.

Sixty students from primary school (grades 7–8), vocational school, and high school completed the e-Learning Burnout Scale (E-SBS) and a one-item short scale assessing their school stress level. Student ages ranged from 11 to 19 years (Mage = 15.66 years; SD = 1.71 years), with 32 girls (52.5%) and 29 boys (47.5%).

The study followed the ethical guidelines outlined in the Helsinki Declaration for research involving human participants. The research project was approved by the Ethical Committee of the Institute of Psychology at the Pedagogical University of Krakow.

Instruments

The Perceived Student Burnout (PSB) Scale was developed based on Maslach's definition of burnout, which identifies three core symptoms. Tomaszek and Muchacka-Cymerman created 11 items to assess observable symptoms, such as a lack of enthusiasm and energy to learn, irritability and nervousness when discussing school duties, anxiety related to school tasks, negative self-beliefs about school performance, feelings of inferiority as a student, disengagement from schoolwork (e.g., negligent performance of tasks), study fatigue, and anhedonia. The scale also allows respondents to add unlisted symptoms. Responses are recorded on a 2-point Likert scale, where 1 = yes and 2 = no. Higher scores indicate higher levels of perceived student burnout. Additionally, the scale contains a control item: "No student burnout symptoms." This concise tool facilitates the quick diagnosis of perceived student burnout.

The **e-Learning Burnout Scale (E-SBS)** consists of 22 items designed to measure a five-dimensional structure of student burnout related to online learning. Respondents rate each item on a 5-point Likert scale (1 Completely Agree, 5 = Completely Disagree). The scale demonstrated high

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reliability, with a Cronbach's alpha of 0.89 for the total score. Reliability for the five components ranged from 0.66 to 0.89 (Tomaszek & Muchacka-Cymerman, 2022).

Perceived school performance indicators were assessed using two items rated on a 3-point Likert scale (1 = poor to 3 = good). These questions explored student performance before and during the COVID-19 pandemic. The perceived need for increased control over the learning process, caused by the pandemic, was evaluated on a 2-point scale (1 = yes, 2 = no).

Statistical Analysis: Basic statistical analyses, including mean scores (M) and standard deviations (SD) for continuous variables, as well as comparative tests (Mann-Whitney U and Pearson's chi-square tests) and Spearman's correlation analyses, were performed using IBM SPSS Statistics 22.0. Exploratory factor analysis (EFA), along with additional fit indices and reliability analysis (Cronbach's alpha and McDonald's omega indicators), were conducted using Jamovi free software. No missing data were identified or excluded from the analysis.

Results

Psychometric Properties of the Perceived Student Burnout Scale

Descriptive statistics

The distribution of item responses significantly deviated from normal distribution (Kolmogorov-Smirnov normality test: $p < 0.001$). Skewness values ranged from 0.08 to 2.60, and kurtosis values ranged from -2.03 to 4.86. Both indexes exceeded the acceptable range of -2 to +2, which suggests significant deviations. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.784, surpassing the threshold of 0.50, which confirmed that the data were suitable for factor analysis. Additionally, the Bartlett's Test of Sphericity ($\chi^2(55) = 356$, $p < 0.001$) indicated significant moderate inter-correlations and sufficient shared variance among items. Based on these results, the maximum likelihood method was selected for the exploratory factor analysis (EFA), as it is

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relatively robust to deviations from normality in the analyzed items (Fuller & Hemmerle, 1966). The extraction communalities were equal to or greater than the threshold of 0.30 for all items, which supports their inclusion in the factor structure.

Exploratory Factor Analysis Results

EFA was performed using the maximum likelihood method with oblimin rotation. The findings revealed that the first three factors accounted for the majority of total variance in the data (eigenvalues > 1). The goodness-of-fit index for the EFA chi-square test evaluated whether the observed correlation matrix was consistent with the extracted factors. An insignificant p-value for the three-factor model indicated that the number of extracted factors was adequate and consistent with the data.

A one-factor solution accounted for 36.7% of the variance, while a three-factor solution explained 47.7% of the variance in the Perceived Student Burnout (PSB) scale (Factor 1: 18.6%; Factor 2: 16.3%; Factor 3: 12.9%). All three factors met the acceptable criterion of eigenvalues greater than 1 (Factor 1: 2.05; Factor 2: 1.79; Factor 3: 1.42). The first factor captured student exhaustion and anxiety and consisted of 5 items with loadings ranging from 0.45 to 0.67. The second factor, representing student self-negativism and inefficacy, included 3 items with loadings ranging from 0.38 to 0.85. The third factor, describing student disengagement and disinterest, comprised 2 items with factor loadings between 0.59 and 0.81. Only one item simultaneously loaded on multiple factors; item 3 showed a loading of 0.59 on the first factor and 0.37 on the third factor (see Table 1).

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Table 1. Exploratory Factor Analysis (EFA): Results (N = 104)

Items	Factor			One-factor solution
	Factor 1 Student exhaustion and anxiety	Factor 2 Student self-negativism and ineffectiveness	Factor 3 Student disengagement and disinterest	
1	0.610			0.541
2	0.588			0.718
3	0.619		0.372	0.577
4	0.672			0.578
5		0.854		0.646
6		0.806		0.620
7			0.586	0.439
8		0.383		0.478
9	0.448			0.608
10			0.811	0.508
11				0.244
Reliability: α/ω	0.774/0.779	0.774/0.776	0.730/0.73	0.813/0.823

Note. 'The'minimum residual' extraction method was used in combination with an 'oblimin' rotation.

A three-factor solution fits the data better than a one-factor solution. Additional fit indexes calculated in the EFA revealed that the Steiger-Lind RMSEA (Root Mean Square Error of Approximation) value was below the acceptable threshold of 0.08 only for the three-factor model (RMSEA = 0.029). Additionally, the Tucker-Lewis Index (TLI = 0.98) and Comparative Fit Index (CFI = 0.92) exceeded the acceptable benchmark of 0.90.

The inter-relationships between the three sub-domains of perceived student burnout were significant (rho ranged from 0.30 to 0.49), and the correlations to the total score ranged from 0.68 to 0.91. Scale reliability statistics indicated high Cronbach's α and McDonald's ω coefficients for the total score (α = 0.81; ω = 0.82), as well as acceptable values for the three distinguished components (α ranged from 0.73 to 0.77; ω ranged from 0.73 to 0.78). It is worth noting that due to the small number of scale items

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(Factors 2 and 3 consist of 3 and 2 items, respectively), α values between 0.45 and 0.60 are considered acceptable (Taber, 2018).

Comparison of Frequency of Student Burnout Symptoms Observed by Teachers and Parents

The U Mann-Whitney comparison test revealed that teachers scored significantly lower in the perceived student burnout total score and its two dimensions: student exhaustion and anxiety, as well as student self-negativism and inefficacy. Moreover, teachers believed that students performed worse academically before the outbreak of the COVID-19 pandemic compared to parents' evaluations. However, parents scored significantly lower in their perceived need for control over the study process (see Table 2).

Table 2. Comparison Between Teacher and Parent Samples in School Performance and Problem Indicators

Variables		Teachers (N=70)	Parents (N=34)	U Mann-Whitney	p
		M(SD)	M(SD)		
Perceived student burnout (PSB)		2.06(2.17)	4.44(3.16)	-3.71	<.0001
Student exhaustion and anxiety		0.97(1.17)	2.50(1.88)	-4.02	<.0001
Student self-negativism and ineffectiveness		0.20(.60)	0.85(1.08)	-3.90	<.0001
Student disengagement and disinterest		0.53(.79)	0.71(,80)	-1.27	0.203
Perceived school performance (PSP)	before online classes	2.53(.63)	2.82(.39)	-2.37	0.018
	during online classes	2.29(.73)	2.47(.56)	-1.08	0.279
Perceived need for more control due to online classes (PNC)[a]		1.34(.48)	1.71(.46)	-3.47	0.001

Note: a – PNC is a reverse item: 1 = yes, 2 = no

Spearman's correlation analysis revealed significant negative associations between perceived student burnout (PSB) and perceived school performance in the teachers' sample. Specifically, PSB negatively correlated with perceived school performance before online classes (rho = -0.49, $p < 0.05$) and during online classes (rho = -0.60, $p < 0.001$). In the parents'

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sample, PSB was negatively associated with perceived school performance during online classes (rho = -0.52, $p < 0.01$) and the perceived need for more control caused by online classes (PNC) (rho = -0.41, $p < 0.05$). However, no significant correlations were found between PSB and PNC in the teachers' sample.

An in-depth analysis using Pearson's chi-square test showed that teachers were less likely than parents to report symptoms from the emotional domain (e.g., exhaustion, loss of enthusiasm and energy, apathy, nervousness, loss of self-control, and anxiety) and the personality domain (e.g., negative self-beliefs, negative self-judgments, loss of positive emotions). Detailed results are presented in Table 3.

Table 3. Comparison of Frequency of Student Burnout Symptoms Observed by Teachers and Parents

List of perceived burnout symptoms		Teachers (N=70)		Parents (N=34)		Pearson's Chi square	p
		n	%	n	%		
1. No burnout symptoms	Yes	21	30%	6	18%	1.82	0.133
	No	49	70%	28	82%		
2. A persistent feeling of exhaustion associated with learning tasks	Yes	1	1%	18	53%	40.67	<0.0001
	No	69	99%	16	47%		
3. Lack of enthusiasm and energy for studying	Yes	27	39%	23	68%	7.75	0.005
	No	43	61%	11	32%		
4. Irritability and nervousness during conversations about school responsibilities	Yes	7	10%	16	47%	18.25	<0.0001
	No	63	90%	18	53%		
5. Anxiety related to school tasks	Yes	9	13%	11	32%	5.60	0.020
	No	61	87%	23	68%		
6. Negative self-perception of academic abilities	Yes	5	7%	11	32%	11.17	0.002
	No	65	93%	23	68%		
7. Belief in being a worse student than peers	Yes	2	3%	9	27%	13.49	0.001
	No	68	97%	25	73%		
8. Lack of involvement in schoolwork (negligent performance of tasks)	Yes	20	29%	10	29%	0.008	0.552
	No	50	71%	24	71%		

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List of perceived burnout symptoms		Teachers (N=70)		Parents (N=34)		Pearson's Chi square	p
		n	%	n	%		
9. Loss of joy (or feelings of sadness, anxiety) when the child is about to start lessons	Yes	7	10%	9	27%	4.77	0.032
	No	63	90%	25	73%		
10. Study weariness from studying	Yes	24	34%	17	50%	2.37	0.093
	No	46	66%	17	50%		
11. Lack of interest in acquiring knowledge	Yes	17	24%	14	41%	3.12	0.063
	No	53	76%	20	59%		
12. "Lowering the bar" regarding educational goals, such as setting less ambitious goals for grades or study fields	Yes	25	36%	13	38%	0.063	0.484
	No	45	64%	21	62%		

Correlations Between Perceived Student Burnout and Experienced Student Burnout

Spearman's correlation analysis found no significant correlations between perceived student burnout (PSB) and school stress or e-learning burnout as reported by students. However, parents' perceptions of student burnout significantly positively correlated with both stress (rho = 0.37, $p < 0.05$) and students' reported burnout (rho = 0.48, $p < 0.01$).

Additionally, higher levels of perceived burnout were associated with students' subjective experiences of e-learning burnout across three dimensions: burnout due to parental pressure, loss of educational interest and motivation, and negative attitudes toward school (rho ranged from 0.40 to 0.51, $p < 0.01$).

Discussion

This study investigated teachers' and parents' perspectives on student burnout, confirming the three-dimensional construct of perceived school burnout as measured by the PSB scale (H1). The results are in line with Maslach's widely accepted theory of burnout, which has been empirically validated in educational settings by Salmera-Aro et al. (2009). The findings revealed that teachers scored significantly lower on the PSB

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scale and its two components—students' exhaustion and anxiety (emotional domain) and self-negativism and inefficacy (personality domain)—compared to parents. However, teachers' and parents' observations of disengagement and disinterest (behavioral and cognitive domain) were similar (H2). A key factor in the educational and psychological well-being of students is teacher leadership. Teachers are mainly responsible for organizing the teaching and learning process at school, which requires a constant readiness to support their students' needs and to help them set and achieve goals. These efforts contribute to academic success and bolster students' self-esteem.

The COVID-19 pandemic underscored the irreplaceable value of in-person relationships for student well-being. Among the many educational changes brought about by the pandemic, remote learning created challenges for teachers in maintaining relationships, establishing emotional connections in virtual classrooms, and sustaining student engagement with learning (Hargreaves, 2021). These factors have also been linked to increased teacher stress and burnout (Madigan & Kim, 2021). According to Maslach and Leiter (2016), teacher burnout can result in diminished involvement in lesson planning and less favorable social interactions with students. These factors may impede teachers' ability to detect early signs of student burnout. Our results indicate the inevitable importance of face-to-face interactions in identifying educational and mental health concerns.

The study revealed that higher perceived student burnout was associated with lower perceived school performance both before and during the COVID-19 pandemic in the teachers' sample. In the parents' sample, higher perceived student burnout correlated with lower school performance during the pandemic and a heightened perceived need for control over the learning process (partially confirming H4). While teachers may recognize students' academic difficulties, this recognition does not necessarily translate into initiatives to provide additional support, such as increased oversight of the learning process.

Support and expectations from significant adults have been shown to directly predict adolescents' competence in school (Wentzel et al., 2016). Conversely, when the classroom environment fails to serve as a source

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of natural support and instead becomes a source of chronic educational and relational stress, it poses a significant risk to students' development. These stressors are hallmark indicators of school burnout syndrome. Previous research further highlights the importance of autonomy support and the detrimental effects of psychological control on adolescent development (van der Kaap-Deeder et al., 2017).

Every source of support that an adolescent encounters during identity formation is a critical factor in enhancing their resilience and contributing to their overall well-being. Based on the findings of this study, it can be concluded that the COVID-19 pandemic exposed a passive attitude among some teachers toward the teaching process and students' mental health during remote classes. While teachers' perceptions of student burnout were not significantly associated with stress and burnout experienced by students during online classes, such correlations were observed in the parents' sample, partially confirming H5.

The ability of teachers to detect early signs of student burnout is closely tied to the quality of teaching and the development of "teacher expertise." Teaching is increasingly recognized as an "emotional practice" in which the well-being of both students and teachers is reciprocally deeply interconnected (Hargreaves, 2021). Our findings support the widely held belief that "satisfaction with Distant Learning Education is heavily based on teachers' ability to maintain high-quality relationships" (du Mérac et al., 2022, p. 177).

In traditional classroom settings, meaningful teacher-student interactions foster high-quality relationships, intrinsic motivation, and increased school engagement. These elements are essential to active learning and achieving high academic outcomes (Quin, 2017; du Mérac et al., 2022). Schools are not only places for acquiring knowledge and skills but also serve as environments where students develop experiences crucial for broadly defined success in life. However, the COVID-19 pandemic and the resulting shift to remote or hybrid education reduced opportunities for in-person interactions (Hodgman et al., 2021). This disruption in teacher-student relationships frustrated basic psychological needs and negatively impacted the well-being of children and adolescents (Bernasor et al., 2022).

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Additionally, during the pandemic, many parents were forced to switch between multiple social roles, including working, managing a household, caregiving, and supporting their children's education at home. These challenges affected interactions between teachers and parents in various ways, such as poorer communication about students' learning difficulties, teachers' struggles to meet parental expectations, parental exhaustion, and teachers' feelings of helplessness (Francis et al., 2022). These dynamics may have further impaired teachers' ability to detect signs of student burnout.

Study limitation

Several limitations of the present study should be acknowledged. First, as all respondents were based in Poland and the sample size was relatively small, the findings have limited generalizability. Additionally, the study focused primarily on the primary education cycle (with six teachers from primary schools); thus, future research should expand to include teaching staff from high schools and universities, as their perceptions may differ significantly due to variations in the quality of interactions at different educational levels.

Conclusion

The key role of teachers in the early identification of school-related issues and the implementation of preventive programs to combat burnout syndrome is well documented in the literature. However, the results of this study highlight the limited knowledge and capacity of teachers to detect early symptoms of student burnout. Therefore, there is a need for professional training programs that equip teachers to recognize chronic school stress symptoms. Such training should also include modules on effective communication and providing emotional support to address the everyday difficulties that students face.

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