The role of professional calling and student cyberbullying on teachers' presenteeism and productivity loss

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ABSTRACT

The teaching profession has always been recognized as one that requires a greater vocational calling. However, education professionals have had to adapt to and manage phenomenons which have arisen due to more demanding work contexts that require them to participate in work, even when they are ill (presenteeism), and to a global-wide digital transformation. Such phenomenons include cyberbullying, which has proliferated in school environments. It is crucial to understand the impact this type of phenomenon can have on these professionals. Accordingly, the main objective of this study was to identify the needs felt by teachers to deal effectively with incidents of cyberbullying and its potential impact on and reduce presenteeism. Two studies were developed, with the intention that the hypotheses posed by the quantitative study could be enriched with the inferences drawn from the qualitative study. A sample of 542 middle school teachers responded to questionnaires and 63 participated in interviews. The results showed that teachers' professional calling led to a lower loss of productivity, due to a lower frequency of presenteeism. This effect was more pronounced in the presence of cyberbullying observation. This study provides a contribution to the calling and presenteeism literature since it focuses on the impact of observing cyberbullying on sickness presence. It is relevant because by knowing the demands that teachers feel and the resources they lack, it is possible to implement tailored intervention and prevention programs to help professionals deal with cyberbullying.

1. Introduction

There are certain professions that have been regarded as true callings since time immemorial, including those of priests, firemen, doctors, and perhaps the most popularly recognized, teachers. It is precisely this profession that this study will focus on. The literature suggests that calling refers to an unrelenting passion for a specific area (Dobrow & Tosti-Kharas, 2011), with great focus and pleasure in a job, which is both rewarding and socially useful (Wrzesniewski et al., 1997), involving a life purpose (Dik et al., 2009). In this regard, the Work as Calling Theory (WCT; Duff et al., 2018) was developed to identify and understand potential predictors and outcomes of feeling a calling at work. The theory

was introduced to overcome limitations of the literature on calling, namely due to the lack of an overarching theory to explain how individuals feel a calling and as a consequence, develop positive and negative outcomes at work (Ehrhardt & Ensher, 2021). This study will focus on the negative aspects (e.g., going to work despite illness) that have been less studied and thus make an additional contribution to the literature (see Table 1).

After the SARS CoV-19 pandemic, one of the most discussed problems in the workplace has been the presence of people at work when they are sick (i.e. presenteeism) (Ferreira et al., 2021). In fact, as one of the most recurrent negative outcomes at work, presenteeism implies significant and recurrent losses in productivity and high levels of

Table 1
Conceptual table of the results obtained in the qualitative study.

Theme	Subtheme	Operationalization
Professional Calling	Engaging in activities that allow them to fulfill their calling	The interviewees mention how fulfilling it is to engage in their profession. The respondents mention how important it is pursue their calling.
Emotional Support	Social support from colleagues and leaders	Respondents highlight the magnitude of support felt by co-workers, peers, and their superiors.
Professional Demotivation	Demotivating factors	Respondents highlight numerous variables that lead to their continued demotivation at work.
Work Overload	Extra working hours	The interviewees expose the amount of times they have to work outside of working hours, denouncing the excessive work ratio.
	High quantity of administrative work	The interviewees signal the exacerbated dimension of bureaucracies that faculty members have to deal with.
Burnout	Excessive exhaustion	The interviewees show a predominance of feelings of exhaustion and burnout.
Sustainability for teachers in the school context	Trainings to make up for the teachers' lack of information to deal with situations	The interviewees stress the primordiality of exchanging knowledge and tools to deal with this context.
	Help from other educational pillars in the school context (school police, operational assistants, psychologists)	The interviewees call for the active participation of other school elements to facilitate the diagnosis and, consequently, the resolution of the numerous situations at school.
Teacher/student relationship	The creation of a positive relationship with children	The interviewees denote the fruitful influence built with the students.
Perceptions of cyberbullying	Knowledge about the concept of cyberbullying	The interviewees specify their position on Cyberbullying, stating a lack of knowledge about it.
	Significant vectors for solving the phenomenon	The interviewees specify their position towards cyberbullying, stating a referral role.

exhaustion (Ferreira & Martinez, 2012). Compared to other professions, teachers have a higher prevalence of reported cases of health-related problems (Health and Safety Executive, 2019) which may have detrimental impacts on presenteeism (i.e., the act of attending work despite illnes) and their capacity to achieve higher performance at work.

Humanyun and cols (2022) suggested a positive relation between professional calling and presenteeism. According to the authors, greater vocation and willingness to perform tasks and channel efforts to increase productivity are associated, even if employees are ill. Hence, this study seeks to respond to challenges raised by Humayun et al. (2022) who suggest the need to understand the direct and indirect relationship between calling and presenteeism in sectors as distinct as education. However, the authors use the Stanford Presenteeism Scale (SPS-6) measure, which is a productivity measure associated with presenteeism, wrongly specifying that they are evaluating presenteeism. The literature on presenteeism (c.f., Ruhle et al., 2020) delimits the approaches of presenteeism frequency (i.e., the frequency with which people go to work when they are ill) and productivity despite presenteeism (i.e., the limitations in productivity attributed to health problems) very well. The current study seeks to respond to the above mentioned limitations essentially attributed to a conceptual error and use more appropriate

measures for the constructs and thereby make a contribution and advance the existing literature. According to the dynamic model of presenteeism and absenteeism developed by Gary Johns (2010), the frequency of presenteeism appears as an antecedent of employee productivity. Hence, the frequency of presenteeism is a channel that can apply professional recall and productivity associated with illness, suggesting a sequence of processes. Basically, there is a behavioral and temporal mechanism that explains the consequences of the call to the profession and its relationship with productivity when teachers are ill. Accordingly, the frequency of going to work when one is ill (i.e., presenteeism) ends up affecting people's productivity largely due to the health problems associated with presenteeism. On the other hand, as calling theory refers, there is a link between work and worker productivity (Duffy, Manuel, Borges, & Bott, 2011). The path linking these two variables is complex and deserves to be studied, above the aspects related to the negative consequences of work as a calling. The dynamic model of presenteeism and absenteeism developed by Gary Johns (2010) states that productivity is affected by how often we go to work when we are ill (i.e. presenteeism). In view of this, it makes sense to extend the study carried out by Humayun et al. (2022) by stating that there is an intermediate condition to explain the relationship between calling and productivity associated with presenteeism and that this variable is the frequency with which people choose to go to work when they are ill. On the other hand, it doesnot make sense to us that the decision to go to work when sick would instead affect the strength or direction of the relationship (i.e., moderation) between professional calling and productivity loss without being part of the causal chain. The theoretical model as conceptualized by Johns (2010) demands a clear relationship between the variables and not a multiplicative effect.

The presenteeism literature also reinforces the importance of considering contextual variables in order to better understand productivity losses when people are ill at work (Johns, 2010; Miraglia & Johns, 2016). The dynamic model of presenteeism and absenteeism developed by Gary Johns (2010) posits a multiplicative effect on the frequency of presenteeism associated with contextual variables such as job demands, safety, absence policy, teamwork, or ease of substitution. However, this model is highly generic and does not account for the specific nature of certain occupations, such as teaching. Conversely, the model does not consider novel contextual variables that may elevate the demand and insecurity experienced by employees with high calling perceptions such as teachers, which, when perceived at high levels, could influence their productivity while ill. One variable that the model does not consider is the observation of cyberbullying phenomena by teachers, which can have a multiplicative effect on the relationship between the decision to work while ill (presenteeism) and consequent productivity. Nowadays, with the advent of digital technologies, contexts of cyberbullying phenomena are appearing more frequently and affecting teachers' daily lives. The construct appears supported by initial conceptualizations of bullying that can be defined as repeated and enduring negative systematic acts of aggression and violence towards one or more individuals by one individual or by a group (c.f., Einarsen, 2000; Zapf & Einarsen, 2001). Derived from these initial conceptualizations, the phenomenon of cyberbullying behavior has been growing and constitutes a challenge for schools (Ferreira et al., 2016) and public health (Ferreira et al., 2021). It is also a global and current phenomenon that involves malicious, deliberate and repeated behavior of an individual towards another, using technological means (Ferreira et al., 2016). Given that this violence emerges and escalates often within schools, it is an issue that inevitably is associated with teachers (Ferreira et al., 2021), school agents and other education professionals who attempt to prevent and intervene in these incidents when possible (Macaulay et al., 2018). However, there are no studies that relate the multiplicative effect that the observation of cyberbullying phenomena may have on teachers' productivity when they are ill and also on the relationship established between the call to the profession and presenteeism. There are various theoretical frameworks that help explain how the observation of

cyberbullying behavior by students subsequently affects the behavior of teachers. We highlight the Learned Helplessness theory (Seligman, 1975) in which teachers feel powerless (due to the perceived lack of control over the situations observed) which tend to result in losses of productivity in the profession. Conversely, the organizational support theory (Eisenberger et al., 1986) enables us to comprehend that when teachers perceive that educational institutions lack the required resources to address and resolve episodes of cyberbullying perpetrated by students, and exhibit a diminished perception of organizational support, this results in diminished motivation and a greater loss of productivity.

On the other hand, as above mentioned, research on the relationship between professional calling and presenteeism is very scarce (or is eventually inexistent), therefore, it needs elucidation and clarification that this article seeks to contribute in a way that will be further developed and explored with a quantitative and qualitative study. To specify, a qualitative study serves to corroborate the hypotheses confirmed in the quantitative study and explore other explanatory variables (e.g., burnout) in the relationship between the variables under study, that could serve as inspiration for future studies. This sequence allows to understand the research problem, and to test the hypotheses. Following the quantitative study, then with a qualitative study, the authors aim to deepen their interpretation of the findings from the quantitative study, expanding the context and providing depth and meaning to the studied variables, and hence, pave other lines of research for further studies.

Basically, it is crucial to mention that this study is innovative in the field of social psychology of education, since it addresses the phenomenon of cyberbullying witnessed by teachers as a cause for the presence of presenteeism, and also aggregates the demands and resources felt by these professionals, given the conditions experienced at work. Thus, this study seeks to fill in the gaps found in articulation between teachers' professional calling and cyberbullying, impacting behaviors and performance when people go to work while ill (presenteeism; Hemp, 2004). Thus, this study seeks to bring theoretical contributions through the work as calling and the presenteeism theories, and practical contributions by highlighting several measures to try and raise awareness in the education sector about this phenomenon inherent to the teaching profession.

1.1. Teacher calling and presenteeism

The Work as Calling Theory (Duffy et al., 2011) aims to provide a comprehensive view of how a perceived calling leads to a lived calling. It also aims to offer a better understanding of the range of outcomes associated with living one's calling. Accordingly, calling is not instantaneously discovered, but rather discovered over time through exploration, experimentation, work identity, introspection, and social affirmation (Bloom et al., 2021; Buis et al., 2024). According to the Work as Calling Theory, living a calling is primarily associated with positive outcomes, but it also has the potential to lead to negative outcomes, particularly those related to an overinvestment in one's work (Duffy, Manuel, Borges, & Bott, 2011), which may lead employees to go to work despite being ill (i.e., presenteeism). Calling refers to a belief that one was destined for a specific area of work due to unique passions, gifts and talents (Bunderson & Thompson, 2009). According to Wrzesniewski et al. (1997), there is a notable distinction between workers who have the conceptualization of calling with those who have jobs or careers and states that the latter are motivated at work by primarily extrinsic reasons and not from within the individual. According to Humayun et al. (2022), individuals who experience a calling, prioritize work over health, and envision their work as dynamic, are highly motivated and self-determined, thus, exhibiting positive work behavior. Workers who feel a calling that is beneficial work variables, are more likely to invest their time and effort at work (Serow, 1994). They become more able to perform, maintain high performance levels due to a constant willingness to change and adapt (Hall & Chandler, 2005).

At present, there is a continuous maladjustment of teachers in their

organizational environments (c.f., Flores, 2020) that also refers to a higher frequency of presenteeism suffered in the educational sector (Ferreira & Martinez, 2012). This is due to the more demanding work sphere with high stress inductions, numerous commitments to colleagues, students, or clients, and hence, more trivial experiences of this phenomenon (Cocker et al., 2011). According to the Work as Calling Theory (Duffy et al., 2011), individuals who feel a predisposition towards a specific career in the work sphere experience more positive outcomes in pursuing that career. Previous Work as Calling Theory suggests the influence of others as antecedents of individual callings (e. g., Bloom et al., 2021), but we want to address the importance of also considering the outcomes of work as calling, especially as this may have implication on individual decision-making at work. Thus, it can be expected that individuals who have this calling and attribute significance to work will have better outcomes and a more desired presence in the workplace than those who do not perceive their career this way. Vocational interests aligned with work tend to lead to better satisfaction and commitment, also increasing engagement and consequently increasing productivity in illness (Kaub et al., 2016). Therefore, we postulate that.

Hypothesis 1. Professional calling leads to less productivity loss when people are ill (presenteeism).

Serow (1994) concluded that teachers with high calling in teaching demonstrate higher levels of enthusiasm and commitment, are more attentive to the impact they generate on others, and are willing to accept the extra challenges and duties that the career imposes on them daily. There is also evidence that the relationship between career calling and negative outcomes such as burnout is explained by work engagement and teacher psychological capital (Zhao et al., 2020). Yee's (1990) study added that teachers who were well-adapted to teaching, were comfortable teaching highly engaged students and felt their calling, in contrast to teachers who reported being poorly positioned in their role. Thus, in addition to contributing to positive outcomes at work, calling also assists teachers in dealing with the problematic issues of teaching and preserving their working conditions when they are threatened (Bullough & Hall, 2011). Precisely one of the least studied relationships, and perhaps the most interesting to study, is the relationship between working as a calling and choosing to go to work when employees are ill. We support this statement with the fact that the teaching profession is very much linked to the calling at work and is at the same time a profession very much marked by presenteeism and attendance behavior cultures. In fact, the literature states that the teaching profession promotes cultures of presenteeism where being present at work (even while ill) is an imperative (Ferreira & Martinez, 2012).

A study conducted by Humayun et al. (2022) highlighted the significant and positive relationship between vocation and presenteeism, and how individuals who experience calling are willing to perform tasks at work and channel their efforts to increase their productivity, even if they are ill. However, as mentioned above, the authors claimed to be evaluating presenteeism, when in fact, they use a measure of productivity losses associated with presenteeism. As previously stated, the dynamic model of presenteeism and absenteeism developed by Gary Johns (2010) demonstrates a causal pathway and temporal sequence between the decision to attend work while ill (frequency of presenteeism) and the subsequent impact on productivity (due to the decision). In this context, it is reasonable to posit that the frequency of presenteeism operates in a temporal sequence, whereby changes in the mediator occur prior to changes in the outcome variable. To clarify this aspect, we propose to examine the sequence of variables that explains whether the relationship with productivity loss in illness is explained by an intermediate frequency of presenteeism that helps explain the relationship between calling to work and productivity variables associated with presenteeism. Thus, the second hypothesis is formulated.

Hypothesis 2. The relationship between calling to work and productivity loss in illness is mediated by reduced frequency of presenteeism.

1.2. The unexpected surroundings: cyberbullying and presenteeism

A study conducted by Pieters and Krupin (2010) with children between the ages of 10 and 17 in a sample of 1357 students found that 29% of students had been victims of cyberbullying and a portion of 52% young people knew someone who had experienced this violence. The literature reiterates that teachers play a vital role in preventing this complication (Epstein & Kazmierczak, 2006), since they are responsible for all activity monitoring, for reinforcing positive behavior, and for imposing disciplinary consequences to inappropriate behavior (Stauffer et al., 2012). Furthermore, their importance in solving peer aggression, arises from them avidly witnessing the interpersonal relationships of their students in the classroom (Desmet et al., 2016).

According to Gary Johns' model (2010), contextual variables play a very important role in employee's decision to go to work when they are sick. The model includes variables such as task demands or cultures of presence, which are very common in educational contexts. However, the model needs updating (it was published in 2010) essentially due to the inclusion of new requirements in the educational sector, such as the observation of cyberbullying phenomena. For example, in the study by Ferreira et al. (2021), they concluded that the observation of cyberbullying episodes is positively correlated with the loss of productivity in teachers' illness due to perceived presenteeism and burnout. However, this study does not explain the possible multiplicative effect of observing these events by conditioning the relationship between the frequency of behavior (i.e., going to work) when teachers are sick and consequently affecting their productivity later.

The Learned Helplessness Theory was initially developed by Seligman (1975), and describes a state where individuals feel unable to control or change a stressful situation (such as observing cyberbullying), leading to passive behavior and reduced motivation. In the context of teachers observing student cyberbullying, this theory suggests that when teachers perceive that the school does not support them in addressing this social phenomenon, they may feel helpless. Observing and dealing with incidents of this phenomenon among students (Slonje & Smith, 2008), is a social element of teachers' work sphere that they have to manage. However, the vast majority of teachers feel helpless, powerless, not knowing how to concretely manage the situation and feel considerable stress (Eden et al., 2013), which compromises their well-being because they experience an adverse environment (Ferreira et al., 2021).

The Organizational Support theory (Eisenberger et al., 1986) posits that employees form beliefs about how much the organization values their commitment and therefore, perform in equal proportion to their beliefs. In addition, the organization gives back according to the efforts made by employees (social exchange). When teachers perceive a lack of organizational support in dealing with cyberbullying, which is to be expected considering the poor supply of resources in Portuguese schools (c.f., Ferreira & Martinez, 2012), they may feel undervalued and unsupported. According to the Organizational Support Theory, this perceived organizational indifference can lead to decreased job productivity when teachers are sick. According to the study developed by Eden et al. (2019), the absence of institutional policies to deal with the phenomenon of cyberbullying, the nonexistence of awareness of the school team concerning the phenomenon, the coping strategies used by parents, and also the fact that some teachers were themselves cyberbullied, impact teachers' motivation and effectiveness, therefore we posit that.

Hypothesis 3. A higher frequency of presenteeism is associated with an increase in productivity losses due to illness, and this effect is more pronounced in the presence of the observation of cyberbullying.

Considering that the Work as Calling Theory is a relatively recent conceptual approach, it is important to acknowledge that while living a calling is generally associated with positive outcomes, it can also lead to negative outcomes, particularly those related to overinvestment in work (Duffy et al., 2011). Other variables beyond presenteeism and

cyberbullying (such as burnout) may explain the initially established relationships and provide a more thorough analysis of the phenomena studied (c.f., Zhao et al., 2022). To achieve this, we will conduct a second, qualitative study to determine the factors that promote professional calls and those that reduce productivity when employees are sick. It will also be interesting to delve into the phenomena resulting from the observation of cyberbullying, as well as to identify effective measures to mitigate its impact on teachers.

2. Methods

2.1. Sample

This study is part of the project Te@ch4SocialGood: promoting prosociality in schools to prevent cyberbullying, developed by a team of researchers from the Faculty of Psychology of the University of Lisbon and funded by the Foundation for Science and Technology (PTDC/PSI-GER/1918/2020).

The qualitative sampling method was non-probability by convenience and through the snowball effect. Data were collected from the north to the south of Portugal and from São Miguel Island in the Azores. Sixty-three individual and semi-structured interviews (with participants who did not take part in the questionnaires) were conducted with middle and high school teachers, aged 31–67 years (M = 50.85; SD = 9.64; 69.4% female). It was made up of teachers from the public (92%) and private (8%) education sectors, from the most varied subjects, Portuguese, mathematics, English, citizenship and development, and physical education, among others, presenting an average of 25.8 years in office.

The inclusion criteria for participating in the study were: a) being Portuguese; b) being over 18 years old; and c) being or having been a middle school teacher. The quantitative sample obtained was 542 teachers with a mean age of 50.06 years (SD = 8.09). They were middle school teachers of various subjects.

2.2. Procedure

To obtain the necessary data, data collection was gathered by applying two instruments: questionnaires and interviews. Initially, the questionnaires were distributed between October and December 2022, and in the next phase, 63 interviews were conducted. Firstly, a quantitative study was conducted through the construction of an online questionnaire via Qualtrics with a duration of 25 min, and the teachers were contacted through social networks and, as soon as they showed interest in participating in the study, they were sent the link to complete it.

In order to ensure an ethical study, authorization for the study was requested from the Ethics and Deontology Committee of FPUL (Minute No. 11 of July 5, 2021). The participants were given the relevant information about the study and were asked to voluntarily fill out the informed consent a priori, which was voluntary. The participants were assured the anonymity and confidentiality of the answers, which were to be used exclusively within the research's scope.

Later, in a qualitative study, we gathered data with an interview script made up of 5 blocks with 39 open-ended questions, and at the end the participants could add relevant aspects to be themes which were addressed. The average length of the interviews was approximately 53.5 min, either online or face-to-face, whichever the participants preferred. The face-to-face interviews were conducted in a neutral location with a tape recorder, whereas the online interviews via Zoom with video recording. Interviewees were contacted through social media (e.g., professional teachers' forums and national teachers' associations), emails or personal contacts to confirm their presence. Depending on their availability and format preference, they were scheduled to meet. In all interviews, voluntary consent for participation and recording was requested so they could be transcribed. After transcription, all

recordings were deleted.

2.3. Data analysis

2.3.1. Quantitative study

The questionnaires were carried out in conjunction with the entire project team, researchers and students using various scales to obtain the relevant information for the study. Subsequent to data collection, they were entered and analyzed using the Statistical Package for Social Sciences (SPSS) software, version 26.0.

Observation of cyberbullying phenomena. The variable observation of cyberbullying at school was measured using a dichotomous scale ranging from 0 = No or 1 = Yes.

Brief Calling Scale. The calling variable was measured using the BCS (Brief Calling Scale), Brief Calling Scale, constructed by Dik et al. (2012). It consists of a 4-item scale, with two items each, the BCS-presence scale, and the BCS-binding scale. The items corresponding to the presence scale include, for example, "I have a calling for a particular job" and "I have a good understanding of my calling as it applies to my career." The items pertaining to the search scale include, for example, "I am trying to understand my calling in my career" and "I am searching for my vocation as it applies to my career". Regarding the psychometric quality, the instrument revealed a good internal consistency ($\alpha = 0.673$). In factor analysis, the Calling Scale had the extraction of 1 factor with a total explained variance of 56.14%.

Frequency of presenteeism. Similarly, to a study conducted by Aronsson et al. (2000), participants were asked to respond to a question: "Has it happened over the previous 12 months that you have gone to work despite feeling that you really should have taken sick leave because of your state of health?" (answers were given on a Likert-type scale ranging from: 1 - "No, never been sick" to 5- "Yes, more than 10 times").

SPS-6. The variable productivity losses during illness was measured using the instrument developed by Koopman et al. (2002), translated and validated into Portuguese by Ferreira et al. (2010). The scale evaluates productivity losses in situations of presenteeism, measuring the perception that individuals have of their performance when affected by presenteeism. The scale is made of six items, with a Likert scale from 1 = Strongly Disagree to 5 = Strongly Agree. Some examples of items are "Due to my health problems, the difficulties that are normally part of my job were more complicated to manage" and "I felt enough energy to complete all my work despite my health problems". Regarding the psychometric quality, this scale showed a good internal consistency ($\alpha = 0.735$). After factor analysis, we calculated the mean of the two factors (33.35% for completed work and 23.07% for avoiding distraction) that result in a single measure of productivity losses associated with presenteeism.

2.4. Qualitative study

The interviews were developed to understand to what extent the perception of cyberbullying phenomena increases the demands and reduces the resources of teachers, resulting in an increase in burnout and presenteeism phenomena. Using NVivo software, we adopted a thematic analysis of the interviews to identify the most relevant themes and patterns (Braun & Clarke, 2006). We built a common tree of categories with the help of a project researcher, started coding the information, then we searched for themes and sub-themes and, when these were consistent, we operationalized the interviewees' narratives, conferring reliability to the data (Braun & Clarke, 2006). We used mixed analysis, given that the construction of themes and subthemes was based on the literature review carried out a priori (deductive analysis). On the other hand, new themes and sub-themes were recognized throughout the construction of the tree (inductive analysis).

Through the analysis of the 63 interviews, we obtained eight themes, as can be seen in Fig. 1, which are: i) calling; ii) emotional support; iii) demotivation with the profession; iv) work overload; v) burnout; vi)
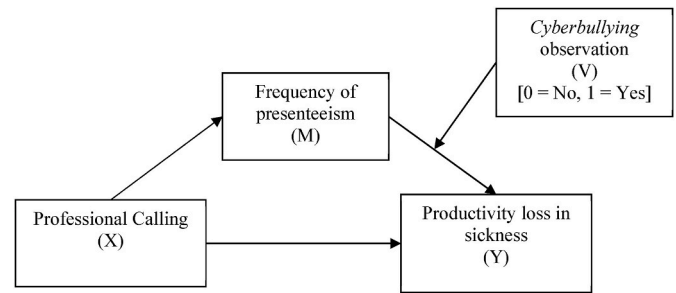

Fig. 1. Mediation model moderated by frequency of presenteeism and observation of cyberbullying.

supports for teachers; vii) relationship with students; viii) and cyberbullying.

3. Results

Separate procedures were developed to understand the relationship between the variables in the qualitative and quantitative data. Thus, the results of the qualitative and quantitative study are shown below.

3.1. Quantitative results

Preliminary analyses show that calling to work correlated negatively and significantly with productivity loss, $p = 0.001$, and with frequency of presenteeism, $p = 0.010$, and that productivity loss associated with illness, correlated positively and significantly with frequency of presenteeism, $p = 0.001$.

3.1.1. Hypotheses testing

To test the proposed hypotheses, we proceeded to test a mediation moderated by the observation of cyberbullying (Model 14). The model was tested using 5000 bootstrap samples with Macro PROCESS in IBM SPSS Statistics 26 software (Hayes, 2018). Professional calling was the independent variable (X), frequency of presenteeism was the mediating variable (M), productivity loss in illness was the dependent variable (Y), and observation of cyberbullying was the moderating variable (V; coded as 0 = No, 1 = Yes; Fig. 1).

The results showed a significant mediation model, $R^2 = 0.139$, $F (4, 411) = 16.556$, $p < 0.001$ (see Table 2). Calling to work had a negative and significant effect on the frequency of presenteeism, $p = 0.028$, which had a positive and significant effect on loss of productivity during illness, $p = 0.001$. The direct effect was negative and significant, $p = 0.000$. As expected, there was a significant interaction between observed cyberbullying and productivity loss during illness, $p = 0.008$. More specifically, the indirect effect was negative and significant for both the absence of cyberbullying observation (b = −0.016, SE = 0.009, 95% CI [-0.036, −0.001]) and the presence of cyberbullying observation (b = 0.038, SE = 0.020, 95% CI [-0.080, −0.003]). The index of moderation by cyberbullying observation was negative and significant (b = −0.022, SE = 0.014, 95% CI [-0.056, −0.000]; Table 3).

In sum, professional calling results in a lower loss of productivity (H1 is confirmed), due to a lower frequency of presenteeism (H2 is

Table 2
Descriptive information and correlations between variables.

Variables	M	SD	1	2
1. *Professional Calling*	3.8	1.0	–	
2. Productivity loss during illness	2.6	0.7	−0.22[b]	–
3. Frequency of presenteeism	3.2	1.7	−0.13[a]	0.30[b]

Note. M = Mean, SD = Standard Deviation.
[a] $p < .05$.
[b] $p < .01$.

Table 3
Results of mediation moderated by frequency of presenteeism (M) and observed cyberbullying (V).

Professional Calling (X) → Productivity Loss during Sickness (Y)						
	b	SE	t	p	CI (lower)	CI (upper)
X → M (a)	−0.150	0.068	−2.120	<0.050	−0.284	−0.016
M → Y (b)	0.105	0.028	3.745	<0.001	0.050	0.160
X → Y (c)	−0.141	0.034	−4.155	<0.001	−0.208	−0.074
X´V → M	0.145	0.054	2.664	<0.010	0.038	0.251
Indirect effect conditional to the absence of observed cyberbullying	−0.016	0.009			−0.036	−0.001
Indirect effect conditional to the presence of observed cyberbullying	−0.038	0.020			−0.080	−0.003
Index of moderated mediation	−0.022	0.014			−0.056	−0.000

confirmed). Furthermore, this effect is more pronounced in the presence of cyberbullying observations, as can be seen in Fig. 2 (H3 is confirmed).

In the following section, a qualitative analysis will be conducted to corroborate the quantitative findings to deepen our understanding of the variables under study. This analysis will allow for an inductive understanding of the professional calling dimension and its relationship with the importance of emotional support. The study will comprehensively analyze the relationship between work calling and presenteeism, taking into account various variables such as lack of motivation, work overload, burnout, support for teachers in the school context, and teacher-student relationships. Furthermore, it will provide readers with a clear understanding of the impact of observing cyberbullying on teachers' daily productivity.

3.2. Thematic findings

Through the analysis of the interviews, several themes relevant to the context of teachers were framed: professional calling; the emotional support perceived by them in their daily lives; demotivation in being a teacher; work overload (excessive workload that the profession entails); burnout (excessive tiredness); the resources desired by teachers to face

adversity; the relationship with their students and cyberbullying, the environment. All these themes prevailed throughout the interviews and were the most mentioned by teachers.

It is this intensive analysis that goes beyond the issue of teachers' perceptions of cyberbullying and allows us to know the causes of teachers' emotional exhaustion and presenteeism. Consequently, it provides answers to alternatives (resources) that are essential from the teachers' point of view to face their daily lives and improve their organizational conditions that the literature has not yet investigated.

3.3. Professional calling and job satisfaction

One of the main themes was calling, the transcendent vocation to address a specific role in life in a way oriented to demonstrate a sense of purpose (Chang et al., 2020), that was very much addressed by teachers, evidencing two subthemes: i) identification with the profession; and ii) happiness at work.

The first subtheme supports the very consistent presence of an identification with one's own job, even if there are less pleasurable moments, more bureaucratic activities or unkind situations, the will to continue working in the profession continuously prevails. The teachers' reports were in agreement with the literature given that employees with greater calling were more likely to be proactive, cope better with obstacles of the profession, and connoted a meaningfulness to their work (Wrzesniewski & Dutton, 2001):

"I feel connected to my profession because of the relationship that I have, I maintain with my professional colleagues, the relationship that I maintain with the students, school community, with the guardians." (SC_07)

"I consider that I am very attached to the profession because I actually really enjoy being a teacher as I said, and I really enjoy working with children" (IA_06)

"I really like teaching, always have, I decided to be a teacher already very young, I was still in middle school, so I always wanted to be a teacher" (SC_07)

In the second subtheme the predominance of feelings of happiness is evident which leads to greater involvement in the profession, greater identification, enthusiasm, and satisfaction (e.g., Bunderson & Thompson, 2009). During the interviews, the importance of being happy in their profession was reported several times by all:

"I am very happy with what I do. I really like being a teacher" (IA_09)

"I feel good teaching, helping people to grow inside. I think that is education. Sometimes we face obstacles, demotivation of people, but I think it is always worth it, we can not feel fulfilled when we transform
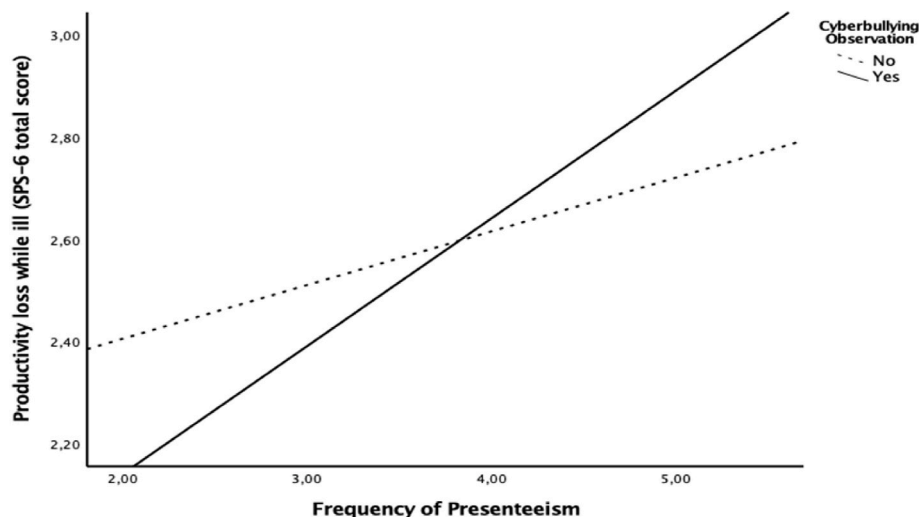

Fig. 2. Moderating effect of cyberbullying observation on the relationship between frequency of presenteeism and productivity loss.

our profession into a mission, so I do this for pleasure" (IA_01)

3.3.1. Emotional support

Emotional support was linked to the social support felt by superiors, colleagues, and peers. Throughout the interviews, the impact that colleagues, family, and management had on their daily lives was mentioned countless times, and this was a congruent opinion among all. Many said that in the unhappiest and most difficult moments, it was the presence of this support that helped them to overcome adversity and maintain their good mood and resilience. This complements the study of Hsieh et al. (2022) who found that organizational support was an asset for teachers, as they felt they belonged to the school community, which quickly raised their motivation levels and encouraged them to give positive feedback to the school. Peer support was reported as one of the most crucial factors in teacher development and school improvement (Kelchtermans & Strittmatter, 1999). As corroborated by their sentences:

"I found teamwork; I was very well received by the English colleagues." (SC_06)

"I don't miss work even because I really like going to school because we have very good moments with colleagues. For example, we have lunch, we have a group that always has lunch together and in fact, it is a moment of relaxation. So, we also try to find ways to have energy and give energy to each other." (IA_09)

3.3.2. Demotivation

In relation to this theme, lack of motivation was consistently mentioned by all, highlighting it as a quite common aspect in this profession. In fact, "one of the issues that most draws attention in the educational system, especially in the public network, is the fact that the teaching profession does not feel fulfilled. The words demotivation, demoralization and disillusionment come up whenever someone talks to a group of teachers" (Santomé, 2006, p. 35). There are several reasons behind this lack of motivation, teachers have come to encompass a multiplicity of duties with many pressures entailed (Santomé, 2006), as the excerpts assume:

"As I say times change a lot and I also said earlier times change a lot if maybe today I wouldn't make this choice doesn't mean I'm dissatisfied, but I've come a long way. I've seen a lot of degraded relationships." (IA_01)

"What affects me is the dissatisfaction with the profession as the profession is seen. There, yes, on my part there is a discouragement and demotivation that has been accentuated and it is not by chance that, nowadays, we do not find kids who want to follow a teaching career. We have a serious problem in the short term. We already have some subject areas where there is a shortage of teachers and I believe that, ah, let's say that at present there are a large number of teachers with a very high age, over sixty ah … on average fifty years old and in a few years many of these teachers may be are retired." (IA_02)

3.3.3. Work-overload

This theme refers to the exaggerated amount of work that teachers reported, divided into two subthemes. The first corresponds to the amount of time teachers were forced to devote to the enormous amount of work, repeatedly extrapolating their working hours. According to Henry et al. (2000), teachers had immense administrative obligations to be fulfilled, following their schedules, giving grades, bureaucratic tasks, going to councils, among others and they could hardly overcome these challenges with the amount of demotivation they experienced.

"I have to have everything on time. I have to work weekends and I never go to bed before two in the morning." (IA_09)

"I think sometimes it's a bit too much work, yes! Too much demand, there should be more awareness" (IA_05)

The second sub-theme concerns the high administrative workload felt by them. Teachers reported being in charge of very extensive paperwork. Prieto et al. (2008) stated this concern felt by teachers that the increased demands on their work had led to a discrepancy in skills.

Given that, much more than dynamic and pedagogical skills were required to teach. It is necessary for teachers to match the quantitative administrative overload, as they mention:

"Lately the bureaucracy has increased a lot and that takes energy away from us for the rest that is the most important thing, which is the preparation of classes, the dynamics of the class itself." (IA_03)

"It's a fear I have, I'm afraid of losing that energy, because currently teaching is, it's extremely bureaucratic. We have more service, it is ridiculous to say this, but it's true, we have more bureaucratic service than exactly time to prepare our classes, that is, to dynamize our material, to make the classes more interesting and that for me is, is a problem. Managing this is very important, and all the teachers complain about this." (SC_07)

3.3.4. Burnout

The theme of Burnout is conveyed throughout all interviews, which is in line with the literature that has been alerting to the consistency of this phenomenon in the profession that requires urgent intervention. Teacher burnout has been associated with turnover intentions and absenteeism (Belcastro & Gold, 1983), as well as irritability and diminished performance (Huberman, 1993). The results obtained show that teachers are exhausted at a psychological and physical level and cannot perform their tasks successfully, contributing to their prominent malaise and low quality of teaching.

"Effectively it's exhausting it is … it's very stressful it is, but it also has to do with our attitude as professionals" (IA_10)

"It's a profession that really wears you out and that I've come to realize more and more, and I look around me and I see teachers who are having a bad time right now and that worries me a little bit" (SC_05)

3.3.5. Support for teachers in the school context

In this theme two subthemes emerged: i) training to make up for the lack of information on the part of teachers to deal with cyberbullying situations and ii) help from other educational pillars in the school context (school police, operational assistants, psychologists).

The first sub-theme refers to the strategy most verbalized by teachers to help them deal with and solve Cyberbullying incidents, that is, training. Teachers repeatedly mention the importance of having training on how to recognize symptoms that may trigger this type of situation, ways to act, how the teacher can detect certain behavior, crisis indicators, how to approach the student, in essence, a workshop in which hypothetical scenarios and tools were provided to be able to distinguish situations. Another crucial point is the passage of concrete and truthful information about cyberbullying. As the excerpts indicate:

"It would be interesting to have training in professional terms. I think it is very important that all teachers have this awareness, have some notions and be awake to the phenomenon." (IA_04)

"I really like to do training and I finished one recently and when I was asked what, what topics would I like to have in the training this was one of them. How to deal with cyberbullying situations because the digital world is endless and so are the alternatives, so the more tools we have to deal with the issue the better. Of course, then there's the other side of the coin, which is, the trainings we do are always a huge burden in personal and professional terms, or they're after working hours or at the weekend or … and we have such a big load that the trainings have to be really useful, practical and preferably online." (SC_06)

However, teachers highlighted the consideration of encompassing various stakeholders in these situations from the school community. They mentioned the role of psychologists, stating that they are the most appropriate professionals to handle these situations. They also mentioned the operational assistants since they spend much of their time watching students outside the classroom, the police, who are the great mediator of these situations and, also, the parents at home acting on the use their children have with their cell phones. These statements are convergent with what studies have been reporting. A study conducted by Macalaulay and colleagues (2018) highlighted that when children

approached teachers to seek help, some adopted positive, by seeking help, whereas others ignored the situation by being neutral. Seeking help from the authorities, by way of example, the police or seeking help from other peers, and parental involvement to solve these situations were the most mentioned.

"Look, having psychologists in the school is one thing that is essential for example. It is essential both for the student when they have problems and sometimes even, we can stop and talk to someone about the situation and the experience."(IA_06)

"So, I think it would be very interesting for the school to work with the authorities in an attempt to find a … I don't know, a point where we could work on this violence" (IA_10)

3.3.6. Teacher-student relationship

This theme demonstrates the importance of the teacher-student relationship, many faculty members report it as a lever to continue indoctrinating in the face of all the negative factors. It is the bond established that motivates them to attend work. Studies have reaffirmed this relationship as one of the main reasons for staying in their profession (O'Connor, 2008). Thus, poor relationships with students pose a threat to teachers' personal and professional well-being. On the other hand, good teacher-student bonding supports several positive variables such as motivation and enjoyment in school (Hargreavez, 2000), as the interviewees state:

"I like teaching, I like the contact with the students, being directly connected to the students." (IA_10)

"It motivates me. Those kids who show interest in the subject (…). I like to feel the pleasure they have in learning these new things and that is the main reason to keep getting up every day and going to school, to feel pleasure in that" (IA_08)

3.3.7. Perceptions of cyberbullying

This theme comprises teachers' perceptions about cyberbullying. It is related to two subthemes: i) knowledge about the phenomenon of cyberbullying; and ii) significant vectors for solving the phenomenon.

In the first subtheme it is evident that teachers do not have consolidated knowledge about the phenomenon, but rather superficial notions about it. From the definitions provided, none of them uses the terms repetitive, intentional, or peer. They refer only to the fact that it is an aggressive and violent act that occurs through technologies, as the following excerpts illustrate:

"Cyberbullying I didn't happen to do my homework, but maybe … it's bullying with social media? Out there, instead of in school, physical, face-to-face contact is like that." (IA_05)

"Characteristic? Its astronomical violence is terrible, it's really terrible. It's terrible young people these days do that to each other through messages, videos, anything and everything, that to me is terrible. Really bad." (IA_06). Thus, it is important to build explanatory and interpretative models to explain this phenomenon, since most people lack information (Amado et al., 2009).

Regarding the second subtheme, on the significant vectors to solve the problem, teachers indicated that it is a problem associated with schools, requiring everyone's intervention in the school environment, decreasing their role of action. This result is congruent with what Desmet et al. (2016) mentioned that an awareness of the whole school team, as well as parents, is needed to act in these situations, as can be seen:

"There in the school when there is some situation whether physical or … the procedure is always to try to contact the psychologist ah, try there some kind of intervention ah and we try to solve it there, if it has already overcome that barrier we always try to ah … talk to the board of directors … that is the principal, and there they assess or even the school ensures when situations are more serious cases." (IA_03)

"What happens is we forward to the disciplinary committee and the disciplinary committee, considering the seriousness of the case, forwards it to the directorate. There is a report that needs to be made and then it is forwarded, and we have the role of passing on this information.

(IA_10)

The information obtained in the interviews allowed us to add answers to the questions posed by the quantitative study, as shown in Fig. 3 below.

4. Discussion

The present study provides an important contribution to research regarding the phenomenon of cyberbullying as a contextual demand in teachers' work, and the growth in the levels of presenteeism and burnout that the observation of the phenomenon has in the teaching profession. Its relevance stems from the fact that the literature has never addressed this topic and, in parallel, with the contribution to the calling and presenteeism theories emphasizing the relevant role of cyberbullying as a contextual variable in explaining the hypothesized relationships. This study intended to go beyond the issue of productivity losses associated with illness, presenteeism and burnout phenomena, and understand, by focusing on why contextual demands of cyberbullying observation are specifically considered by teachers. Thus, through a quantitative and qualitative study, it was possible to discuss the results according to the existing literature.

4.1. Theoretical implications

Overall, the results of the study highlighted that job characteristics had a strong influence on organizational frameworks (Vaiopoulou et al., 2023). The uniquenesses of each work context acts as an antecedent of positive, as well as negative outcomes. As mentioned at the beginning of the introduction, the Work as a Calling Theory has studied the implications of calling in the way it develops positive and negative outcomes at work (Ehrhardt & Ensher, 2021). While there is a tendency to study positive outputs, this study seeks to study the impact of calling on negative outcomes. In particular, what is the relationship between calling and when teachers choose to go to work when they are ill. This relationship with presenteeism, a negative outcome, has not been studied much in the literature and is indeed pertinent. It is pertinent because the education sector is a sector where calling and the need to go to work when sick is a frequent phenomenon (Humanyun et al., 2022) and they often go hand in hand (Ferreira & Martinez, 2012). This study, with its confirmation of hypothesis 1 and subsequent qualitative exploration, makes an additional contribution to the existing literature and promotes the development of future studies relating the variables under study. In that sense, negative outcomes such as the act of going to work while ill can be a good avenue to explore. Not because it was never studied or less studied, but because studying this negative side can have many implications to several professions such as teachers or police officers where professional calling is usually quite high. In fact, as suggested by an anonymous reviewer, whom we thank, there are professions that have a high sense of calling, which can have very negative implications for their workers. This study introduces this important contribution and highlights the need for future studies to question whether high levels of calling are really the solution. Perhaps greater balance and moderation is the right prescription.

This study adds to the limitation of the past studies that either studied the frequency of presenteeism or the productivity but not together (e.g., Humanyun et al., 2022). Supported by the dynamic model of presenteeism and absenteeism (Johns, 2010), it is possible to realize that the frequency of presenteeism is an important antecedent of productivity. Additionally, this contribution extends Johns' model (2010) by interconnecting the model with Work as a Calling Theory while explaining that the frequency of presenteeism explains the relationship between experiencing a calling at work and the productivity losses associated with presenteeism. According to Ferreira and Martinez (2012) and Hemp (2004), presenteeism is associated with significant productivity losses. Thus, in the presence of mediation, increased calling will lead to significant productivity losses when sick, given the
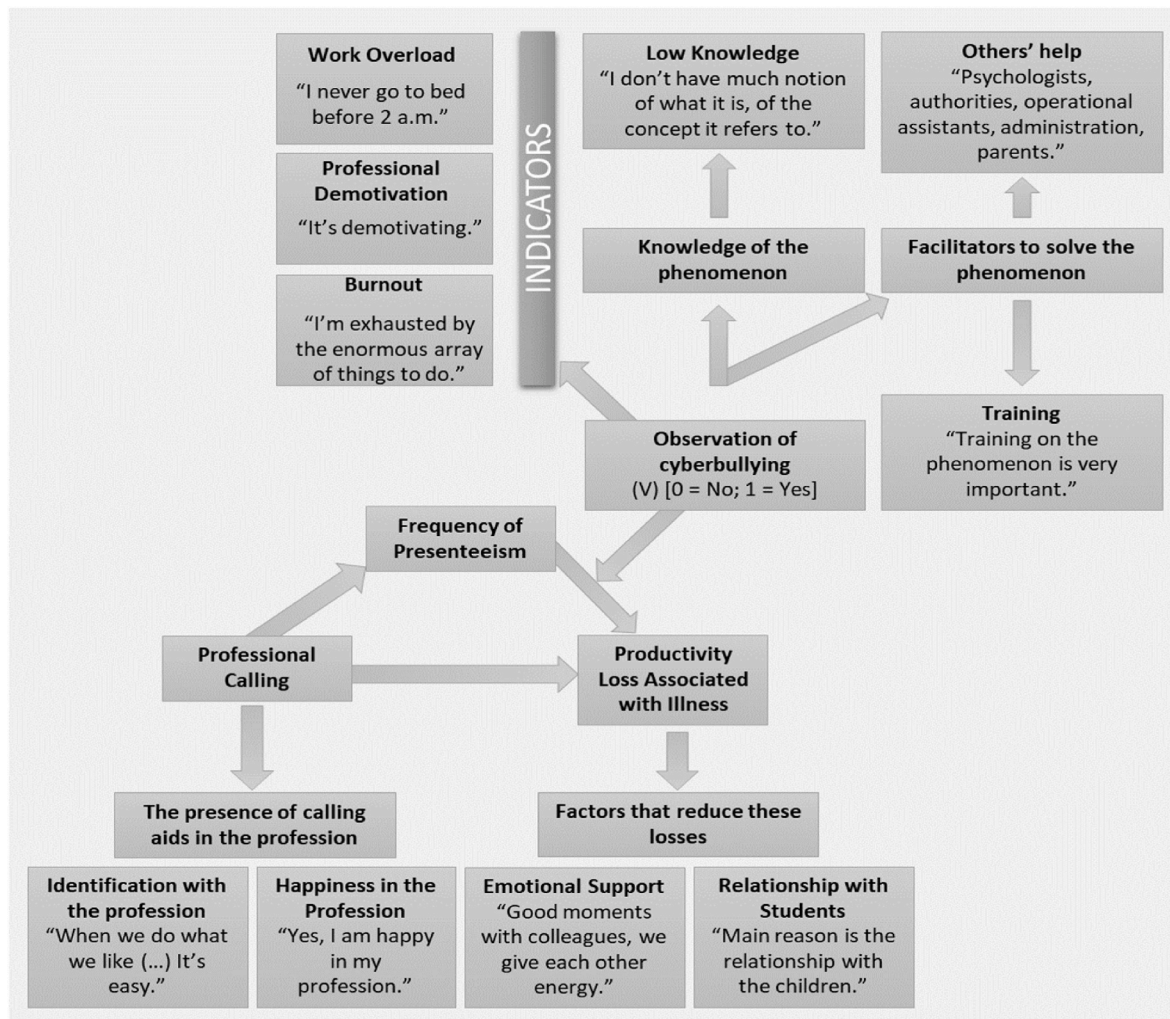
Fig. 3. Conceptual map of the results obtained in the qualitative study.

mediator's impact - the frequency of presenteeism. Throughout the interviews we observed that teachers yearned for an urgent decrease in the demands felt. They justified this with support on the premise that they will get more energy and less fatigue (Bakker et al., 2005).

Finally, regarding hypothesis 3, according to the dynamic model of presenteeism and absenteeism (Johns, 2010), job demands, in this case, observing cyberbullying, can lead to a decrease of productivity when people opt to work while ill. Conversely, as stated by the Organizational Support Theory (Eisenberger et al., 1986) the provision of resources (e. g., training to deal with cyberbullying) could provide opportunities for competency development which impact teachers' work in a positive and productive way, by stimulating their progress (Demerouti et al., 2001). It could lead to lower burnout levels and higher work engagement, which can result in a decrease in productivity loss associated with illness - presenteeism (Ferreira et al., 2019, 2021). Following this theoretical construct, the observation of cyberbullying is an antecedent of presenteeism constituting, in effect, as a new demand added to the new, digital age that emerges in the work of teachers (Miraglia & Johns, 2016).

4.2. Practical implications

This study provides important implications that when put into practice, contribute to reducing the phenomena that dominate the teaching profession, such as presenteeism and burnout. Also from another perspective, to solve the problems associated with

cyberbullying.

Building a support network to collaborate with teachers such as psychologists, operational assistants, and management, fostering a climate of positivity throughout the school community could be very valuable (Ferreira et al., 2021), and is one of the urgent implications to be adopted. The presence of more active parents to detect changes in young people so that timely intervention can be made could also be a marking point for greater intervention efficacy and support for teachers to manage cyberbullying (Veiga Simão et al., 2017).

Mandatory participation in training designed around cyberbullying is vital in view of the current digital transformation in the education sector. The focus of these workshops would be to respond effectively to the needs of teachers, grounding the theoretical explanation of the phenomenon with a practical component on intervention methods and strategies (Amado et al., 2009). Investing government-supported programs and parent associations with social-emotional learning tactics could also aid in actively reducing the incidence of cyberbullying and hence, increasing not only students' quality of life, but teachers' well-being as well (Oliveira et al., 2021). In this regard, the establishment of national and international protocols, regulations and legislation is becoming imperative if governments are to mitigate the problems associated with presenteeism and cyberbullying in schools. The advent of technologies based on artificial intelligence algorithms and coordinated in an Internet of Things logic has enabled the detection of signals in advance (from various sources) that can map suspicious behavioral patterns in order to alert the various educational stakeholders (Aljanabi,

2023).

A primary approach for schools could be to emphasize the calling felt by teachers although it mitigates stress resulting from overly demanding job characteristics (Lobene & Meade, 2013), which are not permanent over time (Bullough & Hall, 2011). With prolonged exposure to hostile environments, teacher's calling may be weakened (Yee, 1990). The measures to be implemented could focus on building and extending the strengths of teachers, by creating conditions for them to teach and feel committed, freely, with the feeling of support so that when they face threats and demands at work, their calling does not weaken (Bullough & Hall, 2011). As mentioned above, calling is not always positive and can have its downsides such as workaholism or going to work at any cost, even when sick. The recommendation we make is that we should work with teachers so that they can find a level of balance that is beneficial for their health and also for all stakeholders involved. A good practice is to rethink human resources practices with teachers, such as remuneration, work relations, and retrenchment to promote more resilience to the demands imposed by new technologies (Segbenya et al., 2024).

4.3. Limitations and suggestions for future studies

This study has limitations that should be highlighted and suggestions for future studies to implement in their research. The fact that the sample used was only Portuguese and given that Portuguese teachers experience a precarious situation with great job instability and job burnout (Mota et al., 2021). There is a constant decrease in the attractiveness of the career in Portugal, lacking career promotions, and thriving on low salaries and unstable bonds (c.f., Flores, 2020), thus, negatively affecting teachers' personal and family life. The inclusion of a more culturally diverse sample, in other countries, would give better reliability to the study.

Furthermore, we need to consider the specific context of the data collection after the SARS-CoV-19 pandemic (i.e., 2022). Therefore we highlight a limiting aspect is the cross-sectional design of the study, which makes it impossible to make inferences of causality between the variables over time, since they were collected at a single point in time. Hence, a longitudinal study would be more reliable in the future. Moreover, future studies could use a larger sample to provide more validity and reliability to the study with the results obtained. Given the levels of internal consistency of the calling scale, we think that other methodological approaches could be considered in future studies. Essentially, using other measures with higher internal consistency, possibly cross-checking the data with other methodologies and sources of data collection (such as the perception of others who may be peers or direct family). Also, two single-item scales were used in the study, which comprises a limitation since it is not reporting variance. The use of other scales with several items to measure knowledge and observation of cyberbullying phenomena and to evaluate the level of burnout of the participants would contribute to increase the validity, reliability, and recognition in the research area in which the present study is framed. In addition, the present study did not include the variable of teaching in the public vs private sector. It would be interesting for future studies to include this variable since the literature highlights the distinction of perceptions and levels of burnout and presenteeism in public and private organizations (Ferreira & Martinez, 2012). Finally, social desirability may have been a limitation, given that participants may have responded in a more acceptable or socially desirable way in their perception (Phillips & Clancy, 1972), however by combining methodologies (quantitative and qualitative), we have somehow managed to mitigate the negative effect of social desirability.

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CRediT authorship contribution statement

Aristides I. Ferreira: Writing – review & editing, Writing – original draft, Validation, Supervision, Methodology, Investigation, Funding acquisition, Data curation, Conceptualization. **Inês Tomás Ribeiro de Almeida:** Writing – original draft, Validation, Resources, Project administration, Methodology, Investigation. **Paula Alexandra Nunes da Costa Ferreira:** Writing – review & editing, Methodology, Formal analysis, Data curation. **Nádia Pereira:** Writing – original draft, Methodology, Formal analysis, Data curation. **Ana Margarida Veiga Simão:** Supervision, Funding acquisition, Conceptualization. **Alexandra Marques Pinto:** Writing – review & editing, Funding acquisition, Conceptualization. **Alexandra Barros:** Writing – review & editing, Validation, Conceptualization.

Declaration of competing interest

The authors declare no conflict of interest. Moreover, this manuscript has not been previously submitted to any other journal. Accordingly, it is being submitted solely to this journal at the present time and is not published, in press, or being submitted elsewhere. Also, we have read and understood all copyright guidelines.

Data availability

Data will be made available on request.

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