Effect of perceived stress, job satisfaction, and workload on the professional self-efficacy of Peruvian regular basic education teachers

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Introduction: The COVID-19 pandemic has had repercussions on teachers' beliefs about their efficacy in their profession. In light of this, the aim of this study was to determine the effect of perceived stress, job satisfaction, and workload on professional self-efficacy among Peruvian regular basic education teachers.

Method: This was a cross-sectional explanatory study involving 687 regular basic education teachers (57.6% women) aged between 23 and 55 years ($M = 38.15$, SD = 8.58), from both private and public institutions across the three regions of Peru (coastal, jungle and highland). The instruments used were the Professional Self-Efficacy Questionnaire (AU-10), the Perceived Stress Scale related to the pandemic (EEP-10), the Affective Job Satisfaction Scale (BIAJS), and the Workload Scale (ECT).

Results: A SEM analysis was conducted, yielding satisfactory goodness-of-fit indices: $\chi^2 = 87.028$, $p = 0.000$, with 11 df, CFI = 0.993, RMSEA = 0.047, and SRMR = 0.021. This confirmed H1, as there is a negative effect of workload on professional self-efficacy ($\beta = -0.11$, $p = 0.017$). Similarly, H2 was confirmed, as there is a positive effect of job satisfaction on professional self-efficacy ($\beta = 0.13$, $p = 0.003$). However, H3 was rejected, as no significant effect of perceived stress on professional self-efficacy was evident ($\beta = -0.02$, $p = 0.658$).

Conclusion: Workload and job satisfaction explain the perceived level of self-efficacy among Peruvian regular basic education teachers. However, there is no evidence to suggest that stress affects their sense of efficacy.

KEYWORDS

perceived stress, job satisfaction, workload, professional self-efficacy, teachers, Peru

1 Introduction

The COVID-19 pandemic posed a significant challenge for teaching practices, particularly in developing countries due to sudden shifts in traditional education and the urgent need to implement virtual classes. Many teachers, especially those in regular basic education, were tested. Unlike their counterparts in higher education, they often had less proficiency in educational technologies (Sierralta, 2021). The students' perception of their teachers as figures of pedagogical authority (Zamora-Poblete et al., 2020) affects the teaching-learning processes (Gil-Madrona et al., 2020). Therefore, one of the most relevant variables for teaching during the health crisis was perceived self-efficacy. This is defined as the set of beliefs teachers hold about their ability to organize and execute necessary actions to successfully accomplish specific teaching tasks in a particular context, thereby potentially having a positive impact on their students' learning (Lingán-Huamán et al., 2023).

According to Bandura's theoretical perspective, these beliefs can be influenced by four sources: mastery experiences, vicarious experiences, social experiences, and physiological and affective states (Yada et al., 2019). In this case, job satisfaction falls within the domain of mastery experiences, as this source is related to past experiences associated with success or failure. Thus, environments where a worker feels satisfied and recognized for their work tend to increase the sense that one is effective in fulfilling assigned tasks. On the other hand, the perception of stress falls within the source of physiological and affective states, since emotional overload and fatigue can be interpreted by the individual as a sign of their own ineptitude and inefficacy for the assigned functions. Finally, the workload is situated within the sources of mastery experiences and physiological states. In this case, an excess in assigned workload can be the cause for the worker not meeting the assigned goals, and this can generate a negative evaluation of their self-efficacy. Along the same lines, an excessive volume of work can generate states interpreted by the individual as signs of vulnerability.

Hence, it's assumed that teachers' own experiences positively or negatively influence the formation of more or less effective beliefs. Self-efficacy is considered a learned belief system about a specific domain that influences how we evaluate a course of action (Bandura, 1997). Effective teachers believe they can impact the learning of students, even those who are challenging, unmotivated, or come from difficult environments (Lazarides et al., 2020).

1.1 Literature review

Based on the scientific literature, studies have shown that teachers with high self-efficacy are better prepared to meet work demands and challenges (Shoji et al., 2016), thus positively affecting the reduction of work stress and improving job satisfaction (Bandura and Adams, 1977). This variable also has an indirect effect on student learning, as some studies found it associated with academic achievement and motivation (Caprara et al., 2006; Skaalvik and Skaalvik, 2016).

Given its importance in the academic field, it's necessary to understand what factors may promote or inhibit its development. During the recent COVID-19 pandemic, three variables played a key role: perceived stress, job satisfaction, and workload. First, perceived stress is defined as a psychophysiological reaction resulting from a negative relationship between the individual and their environment, particularly when the latter is evaluated as threatening or overwhelming compared to the individual's resources (Minihan et al., 2022). Concerning its relationship with self-efficacy, previous studies indicate that self-efficacy beliefs act as a positive resource when facing stress experiences (Steigleder et al., 2023). For instance, a study with teachers in France concluded that a lower sense of self-efficacy increases the likelihood of experiencing burnout (Boujut et al., 2017).

On the other hand, while a substantial amount of research indicates that stress acts as an independent variable negatively affecting other variables such as productivity, emotional well-being, job satisfaction, and other health issues (Struyven and Vanthournout, 2014; Elrayah, 2022), in the case of self-efficacy, there are few studies supporting the assertion that experiencing stress leads to a reduction in favorable beliefs about a teacher's capacity and efficiency. This effect is evident in studies conducted with teachers from England, Hong Kong, Thailand (Klassen et al., 2013), Norway (Skaalvik and Skaalvik, 2016), and the United States (von der Embse et al., 2016), where emotional overload, resulting from dealing with stressors such as lack of student motivation, maintaining classroom discipline, and time pressure (Kokkinos and Davazoglou, 2009; Antoniou et al., 2023), alters the belief system about the capability in specific teaching-related tasks.

Secondly, job satisfaction, defined as the positive emotional state expressed through favorable feelings about one's job duties and functions within a company (Chen et al., 2020), can stem from daily classroom activities, collaboration with colleagues, and the school climate for teachers (Cockburn and Haydn, 2003). High job satisfaction positively impacts the perception of having a quality professional life (Antoniou et al., 2023). However, during the COVID-19 pandemic, the job satisfaction of basic education teachers was significantly affected due to additional challenges such as teaching time, difficulties with remote activities, and lack of access to computer equipment (Souza et al., 2021). While most research suggests that self-efficacy is among the variables significantly affecting job satisfaction, as in a study with teachers in Turkey (Karabiyik and Korumaz, 2014), it's also plausible that when the work environment induces low satisfaction, teachers' self-efficacy diminishes. Evidence of this can be seen in a study using data from teachers in 48 countries, showing that job satisfaction predicts teacher self-efficacy (Burić and Kim, 2021); similarly, another study during the COVID-19 pandemic observed that low satisfaction related to inadequate and improvised working conditions was a cause for altering teachers' self-efficacy beliefs (Zhou and Nanakida, 2023).

Finally, workload is defined as the interaction between task demand levels and the extent of the worker's capabilities to fulfill them (Kokkinos and Davazoglou, 2009). Here, the performance of different roles simultaneously, the pressure of life time (Syrek et al., 2022), lack of recognition, and benefits have been shown to increase the perception of work overload (Antoniou et al., 2023). During the COVID-19 pandemic, work overload was a trigger for stress and dissatisfaction (Mahmood et al., 2021), especially in Latin American countries (Medina-Guillen et al., 2021; Villalobos, 2021; Tello-Castro et al., 2022), where working conditions impaired teachers' health and well-being (Sorensen et al., 2021), causing not only discomfort (Inegbedion et al., 2020) but also the risk of workplace accidents and/ or violence (Oah et al., 2018; Pihl-Thingvad et al., 2021).

In contrast to the aforementioned variables, workload proves to be one of the factors with the greatest effect on self-efficacy. The basis

for this claim can be found in the findings of a study with Canadian teachers, demonstrating that those with higher stress due to workload had lower self-efficacy in performing their jobs (Klassen and Chiu, 2010). Additionally, two recent cross-sectional studies conducted during the health emergency analyzed the functional relationship between workload and professional self-efficacy, finding a significant negative correlation, the first among general university teachers (Minaya-Herrera et al., 2022), and the second among teachers in health science careers (Minaya et al., 2022).

1.2 Justification

Given the critical scenario experienced during the recent health crisis, the educational system had to undergo drastic changes in the teaching and learning process. This caused direct or indirect severe repercussions on teachers' health and competencies (Cortés, 2021; Guevara and Huyhua, 2021), especially for regular basic education teachers. Their professional self-efficacy was tested as they continued with class development in a virtual environment (Sato et al., 2020; Sokal et al., 2020). Although evidence suggests that workload, job satisfaction, and perceived stress are variables that independently affect the sense of efficacy, studies to date have not applied an explanatory model to observe their effects simultaneously. This would highlight the determinants of teachers' sense of efficacy during times of crisis and the predominance of online education.

1.3 Hypotheses

Considering everything presented, the main objective was to determine the effect of perceived stress, job satisfaction, and workload on the professional self-efficacy of Peruvian teachers in regular basic education. In this regard, taking into account the findings in the scientific literature and the analysis carried out by the authors of this study, the following hypotheses are proposed:

- *H1*: Workload negatively affects the perception of professional self-efficacy.
- *H2*: Job satisfaction positively affects the perception of professional self-efficacy.
- *H3*: Perceived stress negatively affects the perception of professional self-efficacy.

2 Methods

2.1 Design and participants

This study is an explanatory cross-sectional analysis (Ato et al., 2013). The study population consisted of regular basic education teachers (early childhood, primary, and secondary levels) from Peru. Due to accessibility issues, it was not possible to form a representative sample for each region. Therefore, a non-probabilistic, purposive sampling method was used. This resulted in the participation of 687 teachers (57.6% women) ranging in age from 23 to 55 years (M = 38.15, SD = 8.58). The participants were from both private (74.4%) and state (25.6%)

educational institutions, teaching at early childhood (20.7%), primary (54.0%), and secondary (25.3%) levels. They worked full-time (72.8%) or part-time (27.2%), with 54.4% on temporary contracts and 45.6% as permanent employees. Finally, most resided in the coastal region (48.6%), followed by the jungle (27.5%) and highland (23.9%) areas.

2.2 Instruments

2.2.1 Professional self-efficacy questionnaire (AU-10)

The AU-10 (Calderón-De la Cruz et al., 2017) is an instrument that probes the self-efficacy beliefs of the working population by assessing the ability to tackle conflicts in usual occupations, for example, item 2: *I will be able to solve difficult problems at work if I try*. The AU-10 consists of a total of 10 items, rated on a Likert scale ranging from zero (never) to six (surely). In the research conducted by Calderón-De la Cruz et al. (2017), reliability was assessed using the Omega coefficient, finding a value of ω = 0.827, indicating acceptable reliability.

2.2.2 Pandemic-related perceived stress scale (EEP-10)

The EEP-10 (Campo-Arias et al., 2020) measures the degree of stress perceived during the social isolation caused by the COVID-19 pandemic, for example, item 2: *I have felt unable to control the important things in my life because of the epidemic*. The EEP-10 consists of 10 items, each with 5 response options ranging from zero (never) to six (always). Items 1, 2, 3, 6, 9, and 10 are scored directly from 0 to 4, and items 4, 5, 7, and 8 inversely, from 4 to 0. In the study by Campo-Arias et al. (2020), reliability was assessed using Cronbach's Alpha coefficient, finding a value of α = 0.86, indicative of acceptable reliability.

2.2.3 Affective job satisfaction scale (BIAJS)

This scale (Thompson and Phua, 2012) aims to measure job satisfaction as an affective higher-order structure, somewhat cognitive and clearly brief, for example, item 3: *Most days I feel enthusiastic about my job*. It consists of 4 items, with Likert-type response options ranging from one (strongly disagree) to five (strongly agree). In the study by Thompson and Phua (2012), reliability was assessed using Cronbach's Alpha coefficient, finding a value of α = 0.83, indicating acceptable reliability.

2.2.4 Workload scale (ECT)

The ECT (Calderón De la Cruz et al., 2018) examines the interaction between the level of task demand and the degree of mobilization of an individual's capacities to perform their work, for example, item 6: *Do you think you have to do a job that is too difficult for you?* It is composed of 6 ordinal items with 5 response options ranging from 0 (never) to 4 (very frequently). In the study by Calderón De la Cruz et al. (2018), reliability was assessed using Cronbach's Alpha coefficient, finding a value of α = 0.80, indicative of acceptable reliability.

2.3 Procedure

Due to the social restrictions imposed by the COVID-19 pandemic, a virtual format was chosen to administer the questionnaires

TABLE 1 Descriptive statistics, internal consistencies, and correlations for variables: workload, perceived stress, job satisfaction, and professional self-efficacy.

Variables	M	SD	α	K	A	1	2	3	4
						r (p)			
1. Workload (CT)	19.37	4.09	0.80	−0.08	0.43	1			
2. Perceived Stress (EP)	17.13	4.86	0.74	1.09	0.23	0.43 (< 0.001)	1		
3. Job Satisfaction (SL)	16.75	2.97	0.87	1.22	−1.18	−0.33 (<0.001)	−0.17 (<0.001)	1	
4. Professional Self-efficacy (AP)	44.77	11.56	0.97	−0.78	−0.64	0.05 (0.186)	0.00 (0.971)	0.10 (<0.001)	1

M, mean; SD, standard deviation; α, Cronbach's alpha; A, skewness, K, kurtosis; r, Pearson's *r*; *p*, *p*-value.

via Google Forms. The survey was available from February 15 to March 3, 2022. The study was promoted through social media and emails sent to participating teachers. Before answering the questionnaire, an informed consent form was presented, detailing the study's objectives and emphasizing the voluntary and anonymous nature of participation. Only those teachers who voluntarily agreed and provided their consent through the informed consent form completed the questionnaire.

2.4 Statistical analysis

The study was conducted in stages. First, a confirmatory factor analysis (CFA) with bidirectional pathways was performed to determine the measurement model. In this case, to explore the internal structure of the scales, the Diagonally Weighted Least Squares with Mean and Variance adjustment (WLSMV) estimator was used, as the scale items were categorized in a Likert format response (Brown, 2015). The RMSEA, SRMR, CFI, and TLI indices were evaluated to measure the fit of the internal structure of each scale, where values lower than 0.08 for RMSEA and SRMR and higher than.95 for CFI and TLI were considered adequate (Kline, 2015). The reliability of the scales was assessed using Cronbach's Alpha coefficient, where a value of α > 0.80 was deemed appropriate.

Second, the study model was analyzed using structural equation modeling (SEM) with the Maximum Likelihood (MLM) estimator, which is suitable for numerical variables and is robust against deviations from inferential normality (Muthen and Muthen, 2017). The fit assessment was conducted using the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). The values used to determine the fit of the SEM were CFI > 0.90 (Bentler, 1990), RMSEA <0.080, and SRMR <0.080 (Browne and Cudeck, 1992). To estimate effect sizes, Cohen (1988) classification was employed, where values close to 0.10 are considered small effects, those near 0.30 as moderate effects, and values around 0.50 or higher are considered large effects. Finally, for reliability analysis, the internal consistency alpha method (α) was used.

Data analysis and calculations were performed using the "R" software, version 4.2.1, utilizing the "lavaan" library, version 0.6-12 (Rosseel, 2012).

2.5 Ethical considerations

The research was approved by the ethics committee of the Peruvian Union University, with reference number 2021-CE-EPG-000021.

3 Results

Table 1 shows that the skewness and kurtosis values are within the acceptable range (K and A = ±1.5), indicating positive suitability for the application of modeling with Structural Equation Modeling (SEM). Statistically significant correlations were also found between workload and perceived stress ($p < 0.001$), workload and job satisfaction ($p < 0.001$), perceived stress and job satisfaction ($p < 0.001$), and finally, job satisfaction and professional self-efficacy ($p < 0.001$). Lastly, the internal consistency index for the four variables ranges from 0.74 to 0.97, indicative of acceptable to very good reliability.

The CFA confirmed the validity based on the internal structure of the job satisfaction scale, with satisfactory indices: RMSEA = 0.06, SRMR = 0.05, CFI = 0.95, TLI = 0.93, and factor loadings for each item ranging from 0.76 to 0.87, values that exceed the recommended minimum of 0.30. Additionally, the variance explained by the factor was over 20% (73.8%), which is the minimum required to determine the unidimensionality of the construct. In the case of the perceived stress scale, its validity was also confirmed as the goodness-of-fit indices were RMSEA = 0.08, SRMR = 0.05, CFI = 0.93, TLI = 0.91, with factor loadings ranging from 0.34 to 0.88, and the variance explained by the factor was 53.9%. For the workload scale, the goodness-of-fit indices were RMSEA = 0.02, SRMR = 0.07, CFI = 0.95, TLI = 0.94, with factor loadings for each item ranging from 0.34 to 0.78, and the variance explained by the factor was 51.4%. Finally, for the professional self-efficacy scale, the goodness-of-fit indices were RMSEA = 0.06, SRMR = 0.06, CFI = 0.97, TLI = 0.96, with factor loadings for each item ranging from 0.66 to 0.97, and the variance explained by the factor was 80.8%.

Upon analyzing the model using confirmatory factor analysis, an adequate fit was obtained. In this case, the goodness-of-fit indices were satisfactory: $\chi^2 = 87.028$, $p = 0.000$, df = 11, CFI = 0.993, RMSEA = 0.047, and SRMR = 0.021. This confirms Hypothesis 1 (H1) as there is a small, yet significant, negative effect of workload on professional self-efficacy ($\beta = -0.11$, $p = 0.017$). Similarly, Hypothesis 2 (H2) is confirmed, indicating a small, significant positive effect of job satisfaction on professional self-efficacy ($\beta = 0.13$, $p = 0.003$). However, Hypothesis 3 (H3) is rejected, as there is no significant effect of perceived stress on professional self-efficacy ($\beta = -0.02$, $p = 0.658$). Additionally, small to moderate positive and negative effects were observed between workload and perceived stress ($\beta = 0.43$, $p < 0.001$), workload and job satisfaction ($\beta = -0.37$, $p < 0.001$), and job satisfaction with perceived stress ($\beta = -0.20$, $p < 0.001$). These results are depicted in Figure 1.

FIGURE 1
Analysis SEM Principio del formulario.
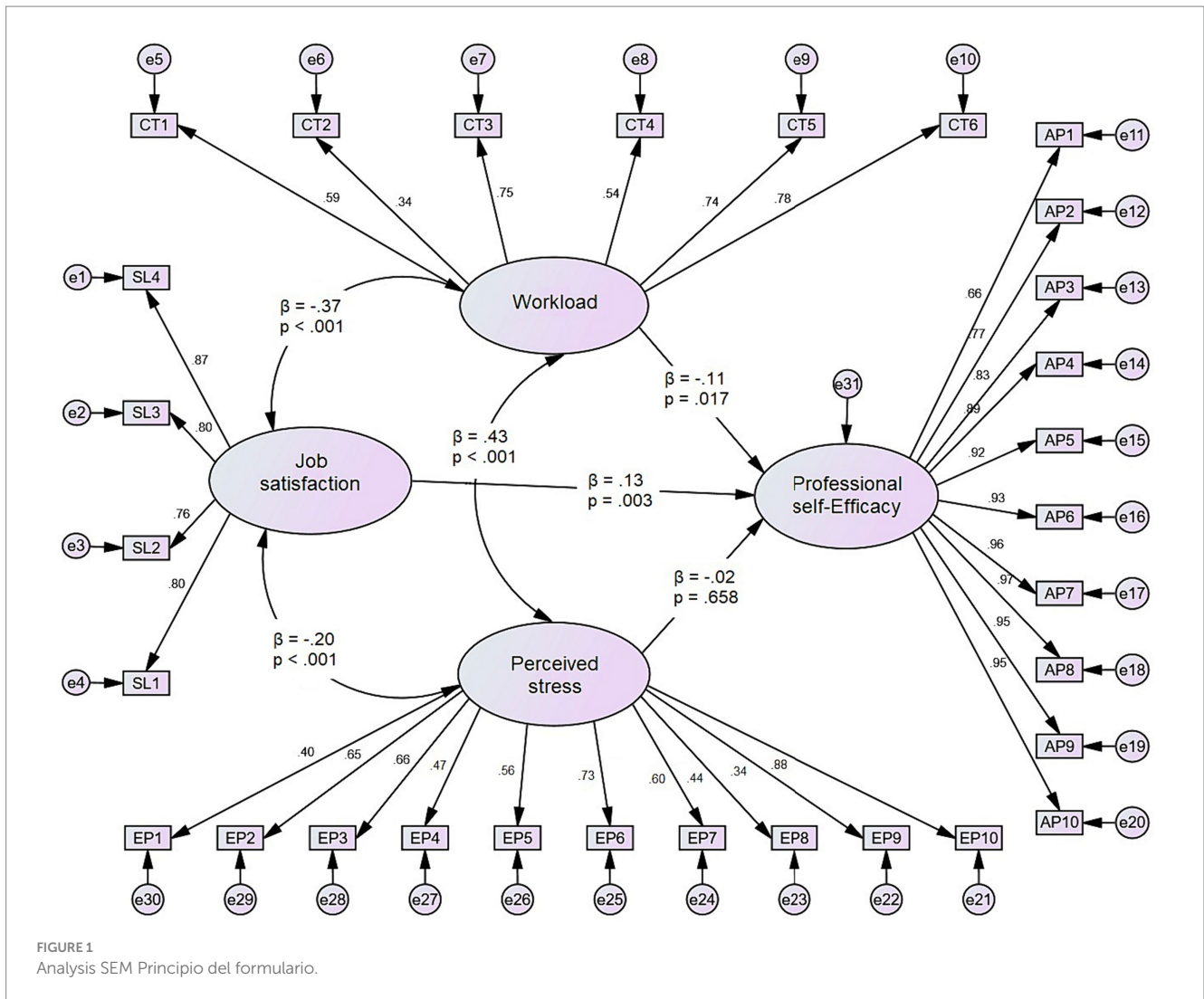
4 Discussion

The manner in which individuals confront a new and threatening situation largely depends on their self-efficacy beliefs (Bandura, 1978). Moreover, self-efficacy plays a role in coping with stress, preserving mental health, and preventing occupational burnout (von Muenchhausen et al., 2021; Cerbin-Koczorowska et al., 2023).

In this context, the findings of this research confirm Hypothesis 1 (H1), demonstrating a negative effect of workload on professional self-efficacy. While some studies have shown that a higher circumstantial workload can motivate workers (Baethge et al., 2018), generally, an excessive workload is associated with negative effects such as increased stress, burnout, and decreased quality of work (Aronsson et al., 2017). Therefore, in the context of the COVID-19 pandemic, the workload has shown a direct relationship with teachers' professional self-efficacy (Minaya-Herrera et al., 2022). Previous studies have confirmed that excessive workload and stress are related to teachers' professional self-efficacy (Topuzov et al., 2020; Eder-Karavaya et al., 2021). The teaching profession predisposes individuals to fatigue and professional burnout (Bortkiewicz et al., 2020), and it has been reported that self-efficacy beliefs are negatively associated with burnout (Baka, 2017). According to Cho et al. (2021), student expectations and workload are factors

influencing teachers' professional self-efficacy, leading to its decrease (Villalobos, 2021). Therefore, it is important to consider workload in evaluating teachers' professional self-efficacy and seek solutions to help them manage workload overload and improve their professional self-efficacy.

On the other hand, H2 is confirmed, in which there is a positive effect of job satisfaction on professional self-efficacy. Various studies suggest a positive relationship between job satisfaction and work self-efficacy (Emin Türkoğlu et al., 2017; Orgambídez et al., 2020; Ma et al., 2021). Professional self-efficacy plays a role in teachers' job satisfaction, as it enables them to believe in their abilities to efficiently perform their work (Ma et al., 2021). Moreover, teachers with high self-efficacy levels also demonstrate robust communication with their students, leading to greater job satisfaction (Emin Türkoğlu et al., 2017). Therefore, considering job satisfaction in basic regular education teachers' professional self-efficacy is crucial.

The results of this study did not show any effect of perceived stress on professional self-efficacy. This can be understood based on Bandura's theory (Bandura and Adams, 1977), where if a teacher maintains appropriate perceptions about their professional efficacy, they are likely to manage stress better, preventing it from affecting their work. Kutuk et al. (2022) found that self-efficacy has an effect on

anxiety, albeit in university students and not in teachers. It's also essential to consider that a significant percentage of our sample maintained an employment status, which might make them feel more secure in their job, avoiding a direct effect of perceived stress (Billett et al., 2023).

The outcomes of this research confirm an effect between workload and perceived stress. Workload, comprised of time pressure and overall volume of tasks, is a fundamental factor in the workplace (Pihl-Thingvad et al., 2021). This situation has been exacerbated in the context of the COVID-19 pandemic, as teachers had to abruptly transition from face-to-face teaching to online instruction. They had to educate using virtual tools without proper training, resources, and experience, leading to an increased workload and heightened stress levels (Medina-Guillen et al., 2021). In Latin America, elevated levels of work overload and stress among basic education teachers have been reported during the COVID-19 pandemic (Villalobos, 2021). In Peru, prolonged working hours also contributed to workload and stress, with negative implications for workers' health (Calderón De la Cruz et al., 2018). According to prior studies, an increase in workload can heighten stress and risk of occupational injuries (Sorensen et al., 2021). Work overload is the second highest risk among teachers and is associated with an increased risk of depressive symptoms (Sato et al., 2020; Pace et al., 2021). Additionally, job demands can become stressors due to a lack of adequate training and can heighten occupational risks (Mahmood et al., 2021). Workload can also amplify psychological burden and the risk of human errors or occupational accidents (Kim et al., 2018).

Another important effect is that between workload and job satisfaction. The findings from this study suggest that workload negatively impacts the job satisfaction of Peruvian basic education teachers during the COVID-19 era. This aligns with results from previous studies (Liu and Lo, 2018; Inegbedion et al., 2020). The perception of a workload imbalance has been proven as a predictor of job satisfaction among workers (Inegbedion et al., 2020). Moreover, it has been reported that teleworking can lead to increased stress and, therefore, reduced job satisfaction among workers (Novianti and Roz, 2020). Vroom's job satisfaction theory (Vroom, 1964) emphasizes that job satisfaction is based on the extent to which a job meets a worker's needs and is comparable to similar jobs (Salancik and Pfeffer, 1977).

Although the results show a low coefficient of determination, they align with the theoretical framework and contribute to predicting professional self-efficacy based on the effects of perceived stress, job satisfaction, and workload among Peruvian regular basic education teachers.

Finally, job satisfaction is a significant construct in the field of occupational psychology, linked to the emotional experience of teachers (Hoque et al., 2023). Hence, the findings demonstrated an effect between job satisfaction and perceived stress. In this regard, perceived stress has adverse effects on teachers' mental health (Sorensen et al., 2021) and can negatively impact workers' psychological well-being (Minihan et al., 2022).

4.1 Implications

The findings of this study hold significant implications for both practice and future research concerning regular basic education teachers. Firstly, measures should be taken to reduce teachers'

workloads, as these can have detrimental effects on professional self-efficacy. It is suggested that educational authorities provide adequate training and resources so that teachers can manage online teaching and reduce their workloads. Job satisfaction should be considered a vital factor for enhancing teachers' professional self-efficacy. Moreover, training programs and strategies should be developed to boost teachers' professional self-efficacy, aiming to equip them with skills that assist in managing their workloads.

Another important aspect of this research is that perceived stress was measured using the EEP-10 scale in the context of the pandemic and under conditions of social isolation. Therefore, its application is directed in that environment and can be replicated under similar conditions.

4.2 Limitations

This study has certain limitations that should be considered when interpreting the results. Firstly, the data were collected at a single point in time, making it impossible to infer causal relationships. In this regard, the results found in this research do not demonstrate a causal relationship or representation, as the data are based on a cross-sectional design (Van der Stede, 2014; Taris et al., 2021). On the other hand, while this study does not show causality, it should not be considered inferior because it is framed within a specific educational context (Shahar and Shahar, 2013) and does not deny the plausibility of the model created.

On the other hand, it is important to consider in relation to the variables, although perceived stress, job satisfaction and workload predict professional self-efficacy, however, the order of the variables could change in equivalent models (Li and Singh, 2024), which means that the Professional self-efficacy could affect the predictors. Therefore, it is important to carry out studies that can cover other equivalent models in order to contrast with the results obtained in this research.

Therefore, it is suggested that longitudinal studies be conducted to evaluate the effects of the variables over time. Additionally, since the sample was collected through non-probabilistic means, the results cannot be generalized to the entire population of Peruvian teachers. Another point to consider is that since the data were collected online, there is a possibility that some participants may not have responded truthfully or may have referred to specific situations, which could introduce some form of bias. Finally, the EEP-10 questionnaire used in this study is limited to the pandemic context, so it is advisable to use other perceived stress measurement instruments in non-pandemic contexts.

5 Conclusion

Despite these limitations, we view this research as a valuable contribution to the literature on professional self-efficacy. We conclude that work overload and job satisfaction explain the level of self-efficacy perceived by Peruvian regular basic education teachers. However, there's no evidence to suggest that perceived stress affects their sense of efficacy.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

The research was approved by the ethics committee of the Peruvian Union University, with reference number 2021-CE-EPG-000021. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

MB: Conceptualization, Investigation, Methodology, Validation, Visualization, Writing – original draft. OM-B: Conceptualization, Investigation, Supervision, Validation, Visualization, Writing – original draft. CZ-M: Data curation, Formal analysis, Investigation, Methodology, Software, Visualization, Writing – review & editing. JT-C: Investigation, Methodology, Validation, Visualization, Writing – review & editing. WM-G: Formal analysis, Investigation, Methodology, Validation, Visualization, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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