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Burnout and well-being among higher education teachers: Influencing factors of burnout

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Abstract

Teacher burnout is a barrier to improving the quality of the educational system, and research focusing on this issue is still required. The present study aimed to investigate the prevalence of burnout among higher education teachers in Thailand. The association between burnout and well-being was determined. The affecting factors of each burnout dimension were also clarified. There were 410 participants across all regions in Thailand who participated in this cross-sectional study. The scores from the Maslach Burnout Inventory, the National Aeronautics and Space Administration Task Load Index, the Pittsburgh Sleep Quality Index, the Depression Anxiety Stress Scale, and the World Health Organization Quality of Life were reported. Musculoskeletal symptoms were also observed to affirm burnout. A high prevalence of burnout among the teachers was observed, which was also associated with their well-being. Age and workload were found to affect emotional exhaustion. Higher working hours as well as work experience also affected the depersonalization domain. Reduced personal accomplishment was dependent on salary. The present study supported the idea that monitoring burnout and risks at both personal and organizational levels may promote precise self-care and welfare for preventing and relieving burnout holistically.

Keywords Burnout, Well-being, Higher education, Mental healing, Occupational health

Introduction

Burnout has been recognized as an occupational hazard reducing interests in occupational and personal activities. It is characterized by three dimensions which include feelings of energy depletion or exhaustion, feelings of cynicism related to the job, and reduced professional efficacy [1]. The World Health Organization (WHO) also defines burnout in the 11 th revision of the International Classification of Diseases (ICD- 11) as an occupational phenomenon. Numerous studies have reported an increase of burnout prevalence among healthcare workers during the COVID- 19 outbreak, and there is a growing need for interventions to improve their well-being [2–4]. Burnout in teachers was also the focus of some studies [5]. It has been reported that teachers have also experienced a high rate of burnout during the pandemic.

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Interestingly, growing evidence shows that occupational health reducing burnout symptoms are strongly related to improving well-being. It also has been reported to prevent and reduce the negative impacts of pandemics [6, 7].

Teacher burnout is a barrier to improving the quality of the educational system [8–11]. It has been reported that burnout syndrome causes detrimental effects on the teaching profession. Professors with high levels of burnout are unable to provide pedagogical lessons effectively because they cannot build positive relationships with students and understand students' needs [8, 10, 11]. Additionally, burnout makes it difficult for teachers to stay in contact with current trends in their field of expertise [8, 10, 11]. Regarding health, musculoskeletal disorders, sleep disturbances, symptoms of moodiness, and depression symptoms are commonly observed among teachers with burnout [12]. Teachers with high levels of burnout also have been reported to suffer from many medical conditions, such as respiratory and metabolic problems [12]. Besides causing low quality of work, health problems from burnout may result in a high rate of absence, dropout, and early retirement among teachers [8]. Therefore, this may also weaken economic growth and worsen problems in an aging society. Since burnout impacts the quality of the teaching and teachers' health, it is essential to seek ways for preventing and relieving teacher burnout. Together, there is a need for both scientific and political attention for this issue [13].

It is difficult to detect burnout symptoms in the early stage because it always gradually occurs [14]. Therefore, monitoring risk factors of burnout to adopt preventive and relief measures as early as possible may be the suitable strategy. It has been generally proposed that working conditions, sociodemographic characteristics, and supportive facilities are the justifying factors of burnout [12, 13]. In addition, the importance of well-being has been widely acknowledged in modern society. Promoting well-being for all has been one of the sustainable development goals (SDGs) established by the United Nations as a global development agenda to be achieved by 2030. Well-being is a state of happiness and functioning well, including having good mental health, high life satisfaction, a sense of meaning and purpose, experiencing positive relationships, the ability to manage stress, etc. [15]. In more general terms, well-being is feeling well that emerges from thoughts, actions, and experiences. Personalized well-being has been reported to be linked with success at personal, interpersonal, and professional levels; and better outcomes regarding physical health and longevity. Well-being is also connected to effective learning, creativity, empathy, positive relationships, workplace productivity, and healthy behaviors [15]. The present study aimed to investigate prevalence of burnout among Thailand's higher education teachers as well as association between burnout and well-being. The affecting factors of each burnout dimension were also clarified.

Methods

Participants

The present study was a cross-sectional study among Thailand's higher education teachers to determine whether burnout and well-being are associated with each other and what are the affecting factors of each burnout dimension. The estimated sample size was 395 by using the Taro Yamane method. A higher education teacher is a faculty member who plays a role in teaching and contributes to the body of knowledge in a field of expertise, i.e., undertaking scholarship activities and conducting research. University teachers in all regions of Thailand (i.e., central, eastern, northern, northeast, southern, and western) thus were chosen and contacted via their e-mail addresses by simple random sampling because this provided an equal chance of being selected [16]. Research information sheets were distributed via e-mails (1,630 e-mail addresses). The inclusion criteria included being a university teacher in Thailand and having at least a year of work experience. Participants who reported medically diagnosed depression were excluded. Data was collected from July to October 2022. It was hypothesized that there are associations between burnout and well-being. Related sociodemographic and working conditions may affect the severity of burnout.

Variable collection

A Google form was generated for data collection, herein the first part was a consent form and multiple-choice questions (MCQ) or short-answer questions for gathering demographic information and self-reported health (e.g., underlying diseases and musculoskeletal complaint). Thereafter, the Modified Nordic Musculoskeletal Questionnaire (mNMQ) was administered to record the data of musculoskeletal complaint in affected participants. The mNMQ has been considered as a reliable tool for evaluating the present history of musculoskeletal disorders. It has been widely used in research on musculoskeletal disorders in various populations with different occupational groups. Problems associated with musculoskeletal disorders, such as pain and numbness within the last seven days and past six months, were asked according to the nine regions of the body map (i.e., neck, shoulders, upper back, elbows, wrists/hands, lower back, hips/thighs, knees, and ankles/feet) [17]. The Thai versions of the self-reported questionnaires regarding burnout syndrome, burnout-associated problems, and questionnaires-related well-being were sequentially included in the later parts of the form. The participants were asked to

finish the form in an hour, and no participants required more time in replying to the questionnaires than was allotted.

The Maslach Burnout Inventory (MBI) is a standout tool for studying burnout because of its simplicity. Its psychometric properties have been reported in many studies [18]. The MBI is used to assess the feelings and thoughts of people about their work activity, in which 22 questions are classified into three dimensions for burnout syndrome. Nine questions are for assessing emotional exhaustion (EE) that refers to feelings of being exhausted and lacking energy, five questions are for assessing depersonalization (DP) which is defined as an increase of negative and insensitive attitudes toward work, and eight questions are for assessing reduced personal accomplishment (PA) which is characterized by negative answers to oneself and one's work related to episodes of depression, lack of morale, avoidance of interpersonal-professional relationships, low productivity, inability to withstand pressure, and poor self-esteem. Each question was scored on a seven-point Likert scale from "0 (never) to 6 (every day)". The score obtained from the MBI was classified and evaluated according to each dimension. In EE, scores less than or equal to 18 were classified as low level, scores 19 to 26 were moderate level, and scores equal to or higher than 27 were high level. In DP, scores less than or equal to 5 were classified as low, scores 6 to 9 were moderate, and scores equal to or higher than 10 were high. In PA, the scores were interpreted conversely. Scores less than or equal to 33 were classified as high, scores 34 to 39 were moderate, and scores equal to or higher than 40 were low [18]. The National Aeronautics and Space Administration Task Load Index (NASA-TLX) has been implemented worldwide to evaluate overall demands for work difficulty [19]. There are six rating scale questions determining mental demand, physical demand, temporal demand, performance, effort, and frustration from "low to high" or "good to poor". The scores from all questions were summed up and interpreted, in which scores of 0 to 9 were classified as low workload, 10 to 29 were medium workload, 30 to 49 were somewhat high workload, 50 to 79 were high workload, and 80 to 100 were very high workload [19]. Both the MBI and the NASA-TLX were administered in the present study to confirm and support the data from each other.

The Pittsburgh Sleep Quality Index (PSQI) is a self-rated questionnaire for measuring the quality of sleep, in which it asks about subjective sleep quality, sleep latency, sleep duration, sleep habits, sleep disturbances, use of sleep medication, and daytime dysfunction. Its internal consistency and test–retest reliability were also reported [20]. In the present study, the sleep quality of the participants was determined from interpreting the nine self-rated responses of the PSQI. The scale was determined from "0 (no difficulty) to 3 (severe difficulty)". The cut-off value was more than 5, which indicated poor sleep [20].

The Depression Anxiety Stress Scale (DASS- 21) has been currently used to determine adverse mental states, including depression, anxiety, and stress in adults. Its psychometric properties have been reported in many studies, in which it can be comparable to other reliable scales [21]. This self-report questionnaire comprises 21 items with a four-point Likert scale, with seven items for each subscale (i.e., depression, anxiety, and stress). Scale 0 was "did not apply to me at all", 1 was "applied to me to some degree or some of the time", 2 was "applied to me to a considerable degree or a good part of the time", and 3 was "applied to me very much or most of the time". The score of each item was multiplied by two, and then it was interpreted. The depression subscale score of 0 to 9 indicated no evidence of depression, 10 to 13 indicated mild depression, 14 to 20 indicated moderate depression, 21 to 27 indicated severe depression, and more than or equal to 28 indicated extremely severe depression. The anxiety subscale score of 0 to 7 indicated no evidence of anxiety, 8 to 9 indicated mild anxiety, 10 to 14 indicated moderate anxiety, 15 to 19 indicated severe anxiety, and more than or equal to 20 indicated extremely severe anxiety. A score of 0 to 14 in the stress items indicated no evidence of stress, 15 to 18 indicated mild stress, 19 to 25 indicated moderate stress, 26 to 33 indicated severe stress, and more than or equal to 34 indicated extremely severe stress [21].

The World Health Organization Quality of Life (WHOQOL-BREF) has been used in various populations with and without diseases, and its content validity and internal consistency has been reported in many previous studies [22]. It was administered in the present study to determine the well-being of university teachers in Thailand. The WHOQOL-BREF comprises 26 five-point Likert scale questions on the individual's perceptions of well-being in four domains including physical health, psychological health, social relations, and environment. The global score ranged from 26 to 130. Poor quality of life was indicated by a score of 26 to 60, moderate quality of life by a score of 61 to 95, and good quality of life by a score of 96 to 130. In the physical health domain, a score of 7 to 16 was poor, 17 to 26 was moderate, and 27 to 35 was good. In the psychological health domain, a score of 6 to 14 was poor, 15 to 22 was moderate, and 23 to 30 was good. In the social relations domain, a score of 3 to 7 was poor, 8 to 11 was moderate, and 12 to 15 was good. In the last domain, a score of 8 to 18 was poor, 19 to 29 was moderate, and 30 to 40 indicated good environment [22].

Cronbach's alpha indicating the reliability of all questionnaires used in the present study were previously reported. All of them have a coefficient greater than 0.70, which is generally considered acceptable for the reliability of a scale and indicates accuracy in measuring the variable of interest.

Data analysis

The data were analyzed by using SPSS Version 23. The Kolmogorov–Smirnov test showed normal distribution of the data. Relationships among the variables (i.e., demographic information and scores obtained from each questionnaire) were determined by the Pearson correlation coefficient. Additionally, multiple linear regression with stepwise method was used for predicting factors affecting burnout in each domain (i.e., EE, DP, and PA). Statistically, $p < 0.05$ was considered as a significant level.

Results

From 1,630 e-mail recipients, there were 415 participants who met the research criteria (reported medically diagnosed depression, $n = 8$). However, five of them were later excluded because their responses were incomplete. Therefore, the response rate was 25.95% and data sets in the present study were obtained from 410 higher education teachers in Thailand which was 25.15% of recipients. There were more women who responded to the questionnaires than men. The mean age of participants was 41 years, with an age range of 25 to 67 years. About half of them were single or married, and a small number of teachers had other marital statuses. The mean salary of the university teachers in Thailand was 48,829.90 baht (Table 1). Regarding professionality and workload, there were more teachers with doctoral degrees who participated in this study than teachers with master's degrees, which all came from various fields of expertise. The highest proportion, approximately 30%, was teachers in the health sciences profession. Most of the participants were university teachers without academic rank, and the number of teachers decreased according to the higher academic ranks. The teaching experience was 12 years on average. The minimum experience was a year, whereas the maximum experience was 41 years. The mean working hours per day were 9 h and the average working days in each week were 6 days (Table 1). Regarding self-reported health in the present study, most of the participants denied underlying diseases (Table 1). However, work related-musculoskeletal problems were reported, especially among teachers with a high level of burnout (S1 Table and S2 Table). Consequently, it also disturbed their functional activity (S2 Table).

Regarding burnout syndrome, burnout-associated problems, and well-being, scores obtained from the MBI, NASA-TLX, PSQI, DASS- 21, and WHOQOL-BREF were

Table 1 Demographic data and self-reported health of university teachers in Thailand

Variables ($n = 410$)	n (%)
Sex	
Female	246 (60.00)
Male	164 (40.00)
Age (year)	
Less than or equal to 30	36 (8.78)
31 to 40	170 (41.46)
41 to 50	147 (35.86)
51 to 60	51 (12.44)
More than or equal to 61	6 (1.46)
Marital status	
Single	205 (50.00)
Married	185 (45.12)
Widowed	4 (0.98)
Divorced	11 (2.68)
Separated	5 (1.22)
Monthly salary (Baht)	
- Less than or equal to 30,000	62 (15.12)
- 30,001 to 60,000	278 (67.80)
- 60,001 to 90,000	53 (12.93)
- 90,001 to 120,000	16 (3.90)
- More than or equal to 120,001	1 (0.25)
Educational level	
Doctoral degree	276 (67.32)
Master's degree	134 (32.68)
Field of expertise	
Agriculture	3 (0.73)
Architecture	15 (3.66)
Biological and Physical Sciences	49 (11.95)
Business Administration, Tourism and Hotel Management, Economics	78 (19.02)
Engineering	37 (9.02)
Fine and Applied Arts	6 (1.46)
Health Sciences	133 (32.44)
Humanities and Social Sciences	21 (5.12)
Physical Education, Sports Education	68 (16.60)
Academic rank	
Professor	2 (0.49)
Associate Professor	26 (6.34)
Assistant Professor	150 (36.58)
Lecturer	232 (56.59)
Experience	
Less than or equal to 5 years	120 (29.27)
6 to 10 years	99 (24.15)
11 to 15 years	83 (20.24)
16 to 20 years	45 (10.98)
More than or equal to 21 years	63 (15.36)
Working hours per day/Working days per week	
Less than or equal to 8 h/5 days	243 (59.27)/193 (47.07)
More than 8 h/5 days	167 (40.73)/217 (52.93)
Underlying diseases	
With underlying diseases	104 (25.37)
Without underlying diseases	306 (74.63)

n is number

reported, respectively. The data from the MBI was divided into three dimensions including emotional exhaustion, depersonalization, and reduced personal accomplishment. The average scores of EE, DP, and PA indicated that higher education teachers in Thailand had high levels in all dimensions of burnout syndrome. There were also a high number of teachers that reported high levels, especially in the PA domain (Table 2). The scores obtained from NASA-TLX showed that the participants perceived their workload was high (Table 2). The scores of the DASS- 21 domains indicated that the participants had moderate symptoms of depression, anxiety, and stress, and the PSQI showed that they experienced poor sleep quality (Table 2). The higher education teachers who participated in the present study reported only a low to moderate level for their quality of life. The average scores in all dimensions for quality of life were also at moderate levels (Table 2).

The correlation test showed that burnout syndrome observed by using the MBI and the NASA-TLX were comparable (Table 3). The burnout of higher education teachers was associated with mental symptoms, especially depression symptoms. Emotional exhaustion was likely the most associated domain. However, scores of each dimension obtained from the MBI were not related to sleep quality (Table 3). Regarding burnout and quality of life, the emotional exhaustion score was related to the psychological domain of quality of life. Depersonalization was associated with the environmental domain. Interestingly, reduced personal accomplishment was associated with the physical, psychological, and environmental domains. However, there was no correlation between burnout and social relations (Table 3). In the present study, regression analysis was also used to determine the factors affecting burnout syndromes among the higher education teachers. It was shown that the emotional exhaustion domain had been affected by age and daily working hours (Table 4). Working hours per day also impacted on the domain of depersonalization but to a lesser extent than the influence of working experience (Table 4). Only salary had an influence on the domain of reduced personal accomplishment (Table 4).

Discussion

Teachers' health does not only have an individual impact, but it also has social relevance due to its impact on the teaching approach [23]. The prevalence of burnout

Table 2 Scores of burnouts, burnout-associated problems, and well-being of university teachers in Thailand

Variables ($n = 410$)	Mean (SD)	n (%)
Maslach Burnout Inventory (MBI)		
Emotional exhaustion	37.66 (7.09)	
High		145 (35.37)
Medium		89 (21.71)
Low		176 (42.92)
Depersonalization	18.23 (4.07)	
High		121 (29.51)
Medium		141 (34.39)
Low		148 (36.10)
Reduced personal accomplishment	15.83 (6.93)	
High		365 (89.02)
Medium		32 (7.80)
Low		13 (3.18)
NASA Task Load Index (NASA-TLX)	63.79 (17.33)	
Pittsburgh Sleep Quality Index (PSQI)	9.48 (3.62)	
Depression, Anxiety and Stress Scale—21 Items (DASS- 21)		
Depression	16.00 (9.57)	
Anxiety	13.26 (9.55)	
Stress	23.59 (9.34)	
World Health Organization Quality of Life Scale (WHOQOL-BREF)	84.14 (14.12)	
Physical health	23.92 (4.17)	
Psychological health	19.47 (3.91)	
Social relations	9.90 (2.08)	
Environment	24.91 (5.94)	

SD is standard deviation

Table 3 Correlations among the scores of burnouts, burnout-associated problems, and well-being of university teachers in Thailand

Variables ($n = 410$)	Maslach Burnout Inventory (MBI)		
	Emotional exhaustion	Depersonalization	Reduced personal accomplishment
NASA Task Load Index (NASA-TLX)			
r	0.387[b]	0.231[a]	- 0.042
p-value	0.000	0.027	0.694
Pittsburgh Sleep Quality Index (PSQI)			
r	0.170	0.119	0.054
p-value	0.106	0.259	0.608
Depression, Anxiety and Stress Scale—21 Items (DASS- 21)			
Depression			
r	0.403[b]	0.255[a]	- 0.237[a]
p-value	0.000	0.014	0.023
Anxiety			
r	0.286[b]	0.254[a]	0.000
p-value	0.006	0.015	0.998
Stress			
r	0.572[b]	0.392[b]	0.067
p-value	0.000	0.000	0.525
World Health Organization Quality of Life Scale (WHOQOL-BREF)			
Physical health			
r	− 0.108	− 0.079	0.269[b]
p-value	0.307	0.455	0.009
Psychological health			
r	− 0.300 [a,b]	− 0.151	0.401[a,b]
p-value	0.004	0.150	0.000
Social relations			
r	− 0.062	− 0.175	0.186
p-value	0.559	0.096	0.076
Environment			
r	− 0.189[a]	− 0.218[a]	0.347[a,b]
p-value	0.072	0.036	0.001

[a] Correlation is significant at the 0.05 level

[b] Correlation is significant at the 0.01 level

indicated by the score of the MBI (a high score in the first two dimensions, EE and DP, and a low score in the last dimension, PA) among higher education teachers in Thailand has been revealed to be at 22.44% in the present study. This was nearly the maximum reported by Holmes and colleagues in 2017, in which the prevalence of burnout among university teachers ranged from 9% to 23.8% [24]. The variability of the reported prevalence may result from the different scenarios of university teachers around the world [24]. The different political and educational organizations for pedagogical structures may contribute to this variability [24]. In Thailand, the workload of higher education teachers is generally distributed to four affairs which include teaching, research, social engagement, and cultural support. The proportion of workload distribution depends on the field of expertise and the type of university (e.g., teaching university, research university, etc.). A university's policy also impacts the teachers' workload. Regarding teaching, a curriculum must be reviewed every year according to the academic quality assurance and renewed every four years by all teachers in the department. Besides the general workload, the high prevalence of teacher burnout observed in the present study may also come from the added demands for online teaching during the COVID- 19 pandemic. The profound transitions that affect political, social, and economic development have been reported to cause high levels of stress among teachers [13].

In the present study, burnout syndrome was also confirmed by musculoskeletal complaint. Approximately 80% of the participants with high levels of burnout reported musculoskeletal pain. The most painful body regions were the shoulder, head and neck, and lower back, respectively (S1 Table). Additionally, approximately 26.09% of them also reported that they had underlying medical conditions (S2 Table). Regarding musculoskeletal problems, physical rehabilitation, and health promotion, health professionals such as physiotherapists and occupational therapists may have a particular role in managing these issues. Even teaching was described as a deeply emotional activity, but little is known about the emotional demand that teachers face or how it affects their well-being [25]. The association among levels of burnout, burnout-related symptoms, and well-being in higher education teachers has been observed in the present study. In agreement with previous studies in many populations [26–28], burnout among university teachers was associated with mental symptoms (e.g., depression, anxiety, and stress). There was a strong association between burnout and depression. Depression was associated with all aspects of burnout, especially emotional exhaustion. It can be explained that depression is a common and serious medical illness that negatively affects the feeling, thinking, and acting of a person. This also implied that mental health support is necessary to prevent mental symptoms, especially depression, which may protect against burnout as well. Although there was no correlation between the PSQI score and the MBI score, the average PSQI score indicated poor sleep quality among higher education teachers. Sleep is an essential physiological need, and poor sleep triggers detrimental effects on the physical and psychological state. Sleep disorders cause people to suffer from symptoms of burnout because of inadequate rest and depletion of energy reserve. A decrease in the ability to recover from burnout

Table 4 Associating factors of burnout syndrome among higher education teachers

Dependent variables	B	SE	Beta	t	*p*-value
Emotional exhaustion					
Age	- 0.297	0.083	- 0.176[b]	- 3.580	< 0.001
Working hours per day	0.780	0.257	0.146[a]	3.032	0.003
(Constant) $R = 0.275$, $R^2 = 0.076$, F = 8.286, *p*-value < 0.001	25.040	4.594		5.450	< 0.001
Depersonalization					
Experience	- 0.099	0.038	- 0.128[a]	- 2.604	0.01
Working hours per day	0.275	0.129	0.105[a]	2.135	0.033
(Constant) $R = 0.177$, $R^2 = 0.031$, F = 6.545, *p*-value = 0.002	8.361	1.323		6.320	< 0.001
Reduced personal accomplishment					
Salary	- 7.630E- 5	0.000	- 0.137[a]	- 2.785	0.006
(Constant) $R = 0.137$, $R^2 = 0.019$, F = 7.755, *p*-value = 0.006	20.725	1.436		14.453	< 0.001

SE is a standard error

[a] Regression coefficient is significant at the 0.01 level

[b] Regression coefficient is significant at the 0.001 level

may lead to cognitive deficits and dysregulation of the hypothalamus-pituitary axis, which in turn affects sleep as a vicious cycle [29]. Regarding the association between burnout and well-being, the present study showed that a high severity of burnout was related to poor quality of life. The psychological domain of quality of life was also related to the EE scores of burnouts. This association was also supported by many studies [30–32] and affirmed a strong relation between mental symptoms and burnout. A correlation between the WHOQOL-BREF and depersonalization was also found in the present study. Herein, it was associated with the environmental domain. It is known that a democratic, participatory, and positive workplace enhances employee perception, whereas long-term exposure to stressful situations leads to impaired feelings and distorted perception of oneself [33]. Interestingly, physical health, psychological health, and environment were associated with reduced personal accomplishment. This supported that health promotion and environment support (e.g., mental health consultation, exercise training, reducing traffic congestion and pollution, etc.) were related to a decrease in burnout through enhancing personal accomplishment [34–37]. It has been reported that family relations also affected burnout, in which it can support personal accomplishment [34–37]. However, an association between social relations and burnout symptoms was not observed in the present study. This was probably due to the finding that social relations observed through the WHOQOL-BREF was dependent only on friends; the score did not reflect other relations that may involve teacher burnout (e.g., family members, colleagues, and students).

In the present study, the factors influencing the burnout domains among higher education teachers in Thailand have been identified. Emotional exhaustion is the core symptom of burnout because it is the feeling of chronic stress and depletion of one's emotional and physical resources [38]. The feeling of work overload and a strong need for rest are considered as an important risk factor for emotional exhaustion and perception of lower quality of life [38]. In agreement with the present study, it has been shown that emotional exhaustion is affected by age and daily working hours. Younger teachers were more likely to experience emotional exhaustion. This can be explained by the development of better coping strategies by older teachers [38]. Work overload and time pressure have been reported to result in job burnout [38]. A previous study has reported that long working hours caused EE when working over 40 h a week, and this effect was more significant when working more than 60 h a week [38]. The mean working hours per day of university teachers participating in the present study were 9 h and their average working days in each week were 6 days. Therefore, they worked approximately 54 h a week. In the context of teachers, depersonalization refers to a sense of emotional detachment or cynicism toward students, colleagues, and the teaching profession. It was found that higher working hours also affected the depersonalization domain. Sonnentag and Kruel forewarned that if employees must work overtime at their places to fulfill and sustain a professional standard, the opportunity for restoring psychological detachment from the job would not be possible [39]. In the absence of recovery, depersonalization can easily occur [1, 38, 39]. Besides the influence of

working hours, experience was also a significant predictor of depersonalization. Less experience generated feelings of job insecurity. With more experience, individuals can learn and create strategies to sustain personalization and good relations [1, 38].

Personal accomplishment is associated with increased job satisfaction and decreased thoughts of attrition. Importantly, it supports empathy and professionalism. Therefore, reduced personal accomplishment affects individual and organizational outcomes. Individuals who face a decline in feelings of job competence and successful achievement usually ignore the environment and tend to evaluate oneself negatively [1, 36, 38]. Management of reduced personal accomplishment is the approach for decreasing burnout effects in many countries [36]. The present study showed that salary had impacted the domain of reduced personal accomplishment. It is well known that the lack of economic and social rewards has been reported to reduce personal accomplishment through induced perceived lack of support [1, 36]. In educational organizations where there was an imbalance between efforts made and rewards achieved, there was a greater prevalence of burnout, sleep disorders, and depression [36, 40]. Teodora Safiye et al. (2023) investigated the relationship between mentalizing capacity and teacher burnout among primary and secondary school teachers in Serbia. A capacity for mentalizing was assessed through two dimensions i.e., hypomentalizing and hypermentalizing. This finding indicated that hypomentalizing positively predicts EE and PA, whereas hypermentalizing negatively predicts EE and DP while positively predicting PA [41]. Although the relationship between mentalizing and burnout is complex and requires further investigation, the study highlighted that teachers' mentalizing capacity and burnout were interrelated phenomena. Notably, a strong capacity for mentalizing appeared to reduce EE, suggesting that policies aimed at enhancing teachers' mentalizing skills could serve as an effective strategy for mitigating burnout [41]. In the context of the present study, daily working hours, teaching experience, and salary may be significant factors influencing teachers' mentalizing capacity, highlighting the need for targeted support and policy adjustments to enhance teachers' well-being and resilience, ultimately reducing emotional exhaustion and depersonalization while promoting personal accomplishment.

Conservation of resources (COR) theory consists of two principles that describe the nature of psychological stress driving humans to maintain current resources and to pursue new resources. The first principle is primacy of resource loss, which explains that it is more harmful for individuals to lose resources compared to the same gain of resources that would have been helpful. Another principle is resource investment, which states that people will tend to invest resources to protect against resource loss, to recover from losses, and to gain resources [42]. Many studies have been conducted in relation to COR and burnout. It has been found that individuals tend to be sensitive to increased demands such as emotion rather than resources received [43, 44]. The present study showed that resources for well-being were also related to burnout. Finding the influencing factor of personal accomplishment also supported the effort-reward imbalance (ERI) model, a model of a psychosocial work environment with adverse effects on well-being that focuses on a mismatch between high efforts spent and low rewards received at work [45]. The job demands-resources (JD-R) model incorporates a wide range of working conditions into the analysis of organizations and employees. Its basis of explanation is that strain including burnout is a response to the imbalance between demands and resources in dealing with those demands [46]. Reduced job demands and the related physiological and psychological cost stimulate personal growth, learning, and development; whereas increased job resources (e.g., performance feedback and social support) may buffer the effects of high job demands, particularly by improving work engagement [46]. The present study also supported the influence of job demands and job resources on burnout and well-being among higher education teachers.

Practical implications

The present study strongly suggests that mental health support is necessary to prevent mental symptoms, especially depression, which may protect against burnout as well. Regression analysis implied that having a balance workload and sharing mentor experiences may help to reduce burnout (i.e., emotional exhaustion and depersonalization) among higher education teachers. Work engagement may be improved by providing resource supportive systems to reduce the risk of burnout symptoms from high job demands.

Conclusion

From the present study, it can be concluded that there is a high prevalence of burnout among higher education academic teachers. Burnout symptoms were associated with their well-being. Age, workload, work experience, and salary were the affecting factors of burnout. An optimal workload and sharing mentor experiences may reduce emotional exhaustion and depersonalization. Health promotion, environmental support, and balance between efforts made and rewards achieved may decrease burnout and improve well-being through promoting personal accomplishment and resilience.

Limitations

Causal relationships have not been determined due to the present study being a cross-sectional study. Well-being is a broad and multifaceted construction; it has been observed by some related questionnaires. Self-reported answers may be exaggerated, and social desirability bias cannot be controlled in the present study. Although participants from all regions of Thailand responded to the questionnaires, the number of respondents from different fields of expertise was not proportionally equal. Future research should adopt a comprehensive and multidisciplinary approach to examine teacher burnout, focusing on identifying its underlying mechanisms, risk factors, and long-term effects. Additionally, studies should explore evidence-based interventions and preventative strategies to develop targeted policies and support systems that mitigate burnout and enhance teacher well-being.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12889-025-22602-w.

Supplementary Material 1

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Authors' contributions
S.P. and N.P. designed the study and wrote the manuscript. P.C., R.T., and S.K. investigated research under the supervision of S.P. and N.P. All authors contributed to the acquisition, analysis, and interpretation of data. R.K. and P.P. validated the project and provided constructive advice. All authors reviewed the manuscript.

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Data availability
The data that support the findings of this study are available from the corresponding author upon reasonable request.

Declarations

Ethics approval and consent to participate
Written informed consent was obtained from all participants through online responses. The present study was approved by the human research ethics committee, Walailak University, Thailand (WUEC-22-190-01). Human subject protection was conducted according to the Helsinki Declaration.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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