THE STUDY OF POSITIVE WORK ENVIRONMENT TOWARDS WORK FATIGUE OF VOCATIONAL SCHOOL TEACHERS

NA ZHANG

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
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INSTITUTE OF SCIENCE INNOVATION AND CULTURE
RAJAMANGALA UNIVERSITY OF TECHNOLOGY KRUNGTHEP
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Author	Na ZHANG
Major	Master of Management (Management Science)
Advisor	Dr. Surachai Traiwannakij

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ABSTRACT

In the era of globalization and the knowledge economy, vocational education is crucial for developing highly skilled professionals, with teaching quality closely tied to the stability and vitality of the teaching staff. Vocational school teachers, who play a central role in skill transmission, face numerous pressures stemming from their responsibilities in teaching, research, and community service. Emotional labor, self-adaptability, and social support have a significant impact on their mental health and work fatigue levels. Educational reforms, such as the implementation of the 108 curriculum guidelines, have increased work stress for teachers. A survey by the King Car Education Foundation (2019) revealed that only 20% of teachers felt prepared for these reforms, highlighting the unpreparedness and pressure felt by the majority. Teachers face challenges, including time-consuming assessments, interdisciplinary collaboration, and difficulties in parent-teacher communication. This study, therefore, aims to investigate the factors influencing work fatigue across four key aspects: demographic factors, emotional labor, self-resilience, and social support. The quantitative method based on questionnaires is applied. Descriptive statistics, including frequency, percent frequency, mean, and standard deviation, are introduced. Various inferential statistical methods are used to test hypotheses, particularly the independent samples t-test, the one-way ANOVA, and the multiple linear regression analysis. The results obtained from the study indicate that differences in age and primary teaching subjects generate differences in work fatigue, while differences in gender, marital status, work experience, and work position generate no differences in work fatigue. The results obtained from the multiple linear regression analyses indicate that surface acting has a significant positive impact on work fatigue. All aspects of self-resilience (recovery orientation and exploration orientation) are found to have positive impacts on work fatigue. All aspects of social support (direct effect and buffering effect) are found to have positive impacts on work fatigue. Finally, emotional labor, self-resilience, and social support are found to have positive impacts on work fatigue.

Keywords: Emotional Labor, Self-resilience, Social Support, Work Fatigue

ACKNOWLEDGEMENTS

First, I would like to express my heartfelt gratitude to my advisor, Dr. Surachai Traiwannakij, whose advice and encouragement provided me with valuable insights into these translation studies. It was a great honor and pleasure to study under his guidance and supervision. I am honored to benefit from his personality and diligence, which I will cherish for the rest of my life.

In addition, I would like to express my heartfelt gratitude to all the professors who helped me, particularly Dr. Yaoping Liu, Director of the Institute of Science Innovation and Culture at Rajamangala University of Science and Technology, and Dr. Pharatt Run and Assistant. Prof. Dr. Kaedsiri Jaroenwisan, along with the members of the examination committee, whose insightful feedback was crucial in shaping this research. I am also very grateful to all my friends and classmates who provided me with help and companionship during the preparation of this paper. Finally, a big thank you to my family for their unwavering love and support.

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CHAPTER I

INTRODUCTION

1.1 Background and Statement of the Problem

In the context of globalization and the knowledge economy era, vocational education plays a pivotal role in nurturing high-caliber skilled professionals, with its teaching quality inextricably linked to the stability and vitality of the teaching staff. Vocational school teachers, serving as the core force in the transmission of skills, face multifaceted pressures stemming from their roles in teaching, research, and community service. Notably, the intensity of emotional labor invested, the levels of self-adaptability, and the strength of social support profoundly influence the mental health and work fatigue status of vocational school teachers (Wild, 2019).

Efforts are being made through educational reforms to achieve the ideal educational realm, and changes in educational policy have also increased the workload for teachers at the forefront of education. Taking the implementation of the 108 curriculum guidelines as an example, the King Car Education Foundation (2019) surveyed 4,112 teachers and found that only 20% of teachers felt they and their school administrative systems were ready for the 108 curriculum guidelines, while the other 80% felt that resources were not yet entirely in place, feeling pressured by such educational reforms. Upholding the spirit of the policy, teachers are the primary executors of the 108 curriculum guidelines, but they also face many challenges in practice. Ding and Hong (2021) identified challenges for teachers implementing the new curriculum, which include not only time-consuming and labor-intensive competency-oriented questions and diverse assessments but also the large workload in interdisciplinary collaboration with colleagues in various disciplines, which is more than they can handle, and the emotional and conceptual difficulties faced in parent-

teacher communication and discussion.

The recent emergence of COVID-19 has not only caused a global crisis and changed people's lifestyles but has also had a significant impact on the educational ecosystem (Zhang, 2021). The pandemic has accelerated the path of change in teaching and learning and has also sparked a wave of remote teaching. Although students have gradually returned to campus learning, the ever-changing pandemic situation has highlighted the importance of innovative teaching methods using technology. As a professional skill, teachers must continue to advance their knowledge in this area. Additionally, focusing on how to increase students' enthusiasm for learning using technological devices is also a key aspect that teachers need to prioritize.

Vocational school students are in a phase of rapid physical and mental development, a critical period for self-exploration and the development of interpersonal relationships. At the same time, they are beginning to explore career paths, encountering diverse and rich fields, and understanding which types of high schools and vocational institutions are suited to them. With the advancement of internet media, grassroots teachers face increasing work pressure and emotional exhaustion from teaching and disciplining students. The continual physical and mental stress can lead to feelings of defeat and result in work fatigue for teachers (Mijakoski et al., 2022).

Vocational school students are in a phase of rapid physical and mental development, a critical period for self-exploration and the development of interpersonal relationships. At the same time, they are beginning to explore career paths, encountering diverse and rich fields, and understanding which types of high schools and vocational institutions are suited to them. With the advancement of internet media, grassroots teachers face increasing work pressure and emotional exhaustion from teaching and disciplining students. The continual physical and mental stress can lead to feelings of defeat and result in work fatigue for teachers (Rubilar & Oros, 2021).

Oberg et al. (2023) suggested that prolonged stress may lead to teacher work fatigue. Teachers who fail to cope effectively with work stress can experience

physical and mental exhaustion, making it difficult for them to engage with their students. When work fatigue occurs, it not only affects the teacher's health but also the quality of teaching (Pogere et al., 2019), diminishing the teacher's enthusiasm for teaching and thereby influencing students' learning and personality development (Baeriswyl et al., 2021). Heffernan et al. (2022) examined work fatigue from the perspective of the conservation of resources theory, likening individuals to energy accounts. An excessive workload depletes an individual's energy, typically replenished through physical, social, or psychological resources. An energy deficit occurs when the resources expended at work exceed those replenished. A prolonged state of deficit can lead to work fatigue.

McCarthy (2019) believes that if a job role requires adjusting to and controlling emotions, or if it requires effort to regulate emotions, it involves emotional labor. Hester et al. (2020) define emotional labor as the effort individuals put in to display the emotions expected by the organization during interpersonal interactions. Therefore, teachers, due to social expectations, need to invest a significant amount of effort and even learn to adjust and manage their emotions to maintain the image of a role model, which can easily lead to emotional labor. Emotional labor resulting from excessive emotional expenditure is the consumption of emotional and mental resources. When viewed through the lens of conservation of resources theory, an individual who consistently works under a heavy workload and continually expends mental resources may experience work fatigue due to prolonged energy depletion. Therefore, this study aims to explore the relationship between emotional labor and work fatigue among college teachers in training institutions, to understand the challenges faced by current training college teachers, and to provide suggestions for improvement to help alleviate work fatigue.

Therefore, this study focuses on the college education stage to explore the current status of teachers in terms of emotional labor, resilience, social support, and work fatigue. It also discusses the relationships between these variables. The aim is to

provide results that can serve as a reference for teachers, school administrators, and education authorities at all levels when making school administrative decisions. By implementing these results in school administrative management, more resources can be allocated to teachers to alleviate work fatigue, thereby enabling students to receive a better education.

1.2 Research Questions

The research questions are as follows:

1. How does demographics influence work fatigue among vocational college teachers?

2. How does emotional labor influence work fatigue among vocational college teachers?

3. How does self-resilience influence work fatigue among vocational college teachers?

4. How does social support influence work fatigue among vocational college teachers?

5. How do emotional labor, self-resilience, and social support influence work fatigue among vocational college teachers?

1.3 Research Objectives

Based on the research background and motivation, this study aims to investigate the complex interplay between emotional labor, self-resilience, and social support, as well as their collective impact on work fatigue among vocational college teachers.

1. To investigate the influence of demographic factors on work fatigue among vocational college teachers.

2. To scrutinize the influence of emotional labor on work fatigue among

vocational college teachers.

3. To explore the influence of self-resilience on work fatigue among vocational college teachers.

4. To inquire into the influence of social support on work fatigue among vocational college teachers.

5. To investigate the influence of emotional labor, self-resilience, and social support on work fatigue among vocational college teachers.

6. To suggest policies for protecting against work fatigue among vocational college teachers.

1.4 Research Framework

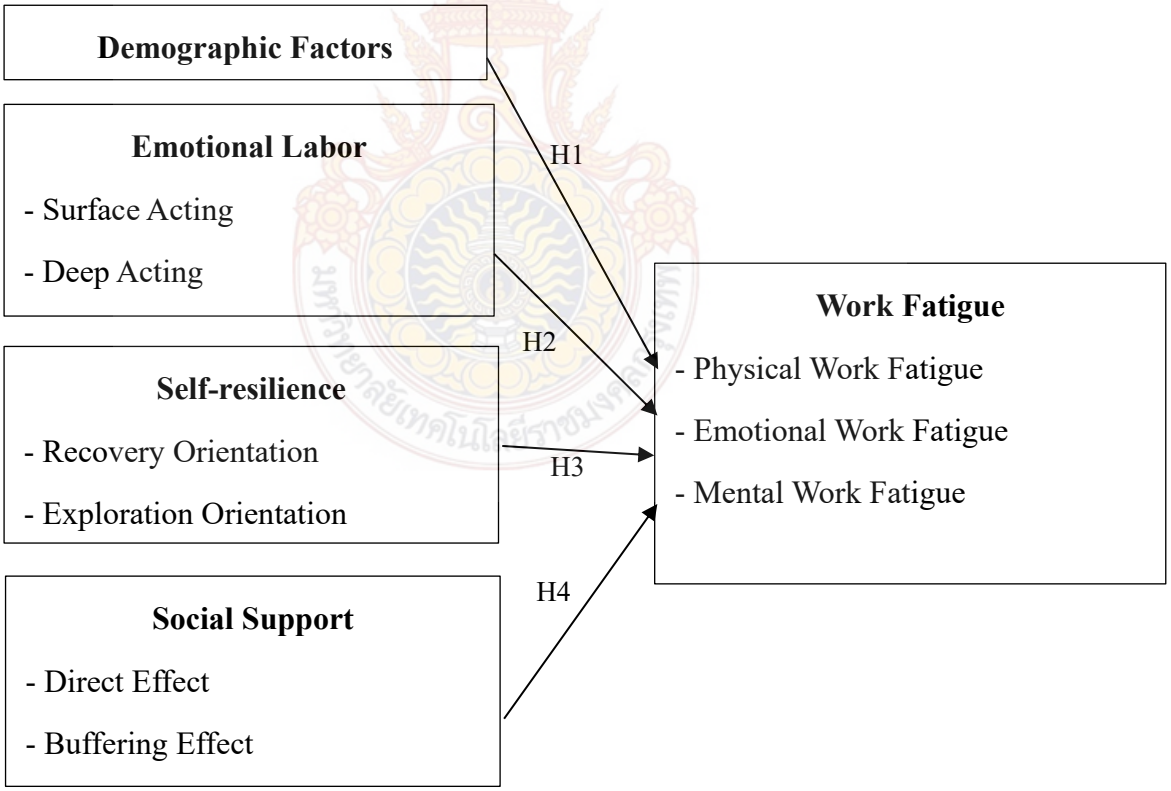

Figure 1.1 Conceptual Framework

1.5 Research Hypotheses

Based on the research questions above, the following research hypotheses are proposed:

H1: Differences in demographic factors generate differences in work fatigue of vocational college teachers.

H2: Emotional labor positively influences the work fatigue of vocational college teachers.

H3: Self-resilience has a positive influence on the work fatigue of vocational college teachers.

H4: Social support positively influences the work fatigue of vocational college teachers.

H5: Emotional labor, self-resilience, and social support positively influence the work fatigue of vocational college teachers.

1.6 Scope of the Research Study

1.6.1 Content

The primary aim of this study is to investigate the impact of emotional labor, self-resilience, and social support on occupational work fatigue among vocational school teachers. In the research design, the independent variables encompass four main aspects: demographic factors, emotional labor, self-resilience, and social support. These independent variables are considered to directly influence the dependent variable, which is work fatigue measured in various ways.

1.6.2 Area of Study

This research focuses on the educational industry within vocational colleges. The paper selected six institutions from across the country, representing a diverse cross-section of vocational education. These institutions are Wuxi Vocational Technical College, Zibo Vocational College, Guangdong Light Industry Vocational

Technical College, Jinhua Vocational and Technical College, Yellow River Water Conservancy Vocational Technical College, and Shenzhen Information Vocational Technical College.

Each college provides a unique perspective due to its geographical location, specializations, and the demographic characteristics of its student and faculty populations. By including various vocational institutions, the study aims to draw a more comprehensive picture of the educational industry across different regions and fields. This diversity ensures that the research findings may be more broadly applicable and reflective of the vocational education sector as a whole.

1.6.3 Population and Samples

The target population of this study includes students from six colleges: Wuxi Vocational Technical College, Zibo Vocational College, Guangdong Light Industry Vocational Technical College, Jinhua Vocational and Technical College, Yellow River Water Conservancy Vocational Technical College, and Shenzhen Information Vocational Technical College, totaling 59,400 individuals.

According to Yamane's (1967) formula, the sample size is approximately 400 units at a 95% confidence level. However, to make it more convenient and more precise, 420 samples, or 70 units per college, were selected.

This study employed a three-stage random sampling. The first stage is the cluster random sampling by choosing 6 vocational technical colleges, that is, the Wuxi Vocational Technical College, the Zibo Vocational College, the Guangdong Light Industry Vocational Technical College, the Jinhua Vocational and Technical College, the Yellow River Water Conservancy Vocational Technical College, and the Shenzhen Information Vocational Technical College. The second stage involves fixing 70 samples from each college, totaling 420 samples. The third stage involves the simple random sampling method, ensuring that every faculty member has an equal chance of being selected. This method not only ensures the diversity and representativeness of the samples but also provides a solid foundation for the reliability of data analysis and

conclusions.

1.6.4 Duration

This study was conducted between November 1, 2024, and May 31, 2025.

1.7 Definition of Key Terms

Emotional Labor: Emotional labor refers to the process of regulating and managing one's emotions as part of their job role. It involves suppressing or displaying specific emotions to meet the job's expectations and requirements. This can include managing emotions such as empathy, sympathy, or friendliness, even if they do not correspond to one's genuine feelings (Grandey, 2015).

Self-resilience refers to an individual's ability to adapt and cope with stress, setbacks, and challenges flexibly and adaptively. It involves being able to bounce back from difficult situations, maintain a positive outlook, and effectively solve problems in the face of adversity (Hidayah & Morganna, 2022).

Social Support: Social support refers to the assistance, encouragement, and resources provided by others, such as colleagues, friends, family, and supervisors. It can be emotional support (e.g., empathy, understanding), instrumental support (e.g., tangible assistance), or informational support (e.g., advice, guidance). Social support plays a crucial role in buffering the adverse effects of stress, providing a sense of belonging, and enhancing overall well-being (Chen et al., 2020).

Work Fatigue: Work fatigue is a state of physical, emotional, and mental exhaustion resulting from prolonged exposure to work-related stressors. It is characterized by feelings of cynicism, detachment, and a reduced sense of personal accomplishment. Work fatigue can negatively impact job satisfaction, performance, and overall well-being (Chen, 2021).

1.8 Research Significance

This study not only enriches the existing academic literature on occupational stress in the educational sector but also has far-reaching implications for enhancing teacher well-being and educational quality. By shedding light on the factors contributing to work fatigue, the research can inform the development of targeted interventions and supportive policies, which are crucial for fostering a positive work environment and reducing teacher turnover. The insights gleaned from this study could lead to systemic changes within vocational education systems, potentially benefiting a wide range of professions where emotional labor is prevalent, and thus have a global impact on the education and preparation of the future workforce.

CHAPTER II

LITERATURE REVIEW

2.1 Related Theories

2.1.1 Theory of Emotional Labor

The term "emotional labor" was first introduced by Jeung et al. (2018), referring to individuals creating facial expressions or body movements observable by the public through emotional management techniques, in exchange for wages. It involves commercializing emotions and considering service as a performance. Grandey and Melloy (2017) state that emotional labor involves impression management, where workers guide their behavior based on societal expectations, involving mental effort.

Yang and Chen (2021) state in their "Conservation of Resources Theory" that individuals actively protect resources they value, including personal inner energy. Individuals will experience discomfort if they face threats or continuously deplete these resources. Emotional labor refers to the effort teachers expend in displaying various emotions at work. If this effort is not appropriately replenished, it leads to continuous depletion of inner energy resources. Work fatigue is defined as a state of physical and mental exhaustion. In connection with the conservation of resources theory, an increase in emotional labor beyond what an individual can bear will lead to the onset of work fatigue.

Grandey and Sayre (2019) defined emotional labor as the effort, planning, and control individuals exert to display expected emotions in interpersonal interactions in order to meet organizational expectations. They identified four dimensions of emotional labor as follows:

(1). Frequency of Emotional Expression: The frequency of interactions

between employees and customers. More frequent contact requires employees to conform to emotional norms, resulting in higher levels of emotional labor.

(2). Attention to Display Rules: The duration and intensity of emotional expression during interactions with customers. Longer interaction times and more intense emotional displays require greater effort to control, leading to higher levels of emotional labor.

(3). Diversity of Emotional Expression: The variation in emotional displays based on different individuals and situations. Greater diversity in emotional expression leads to higher levels of emotional labor.

(4). Emotional Dissonance: The gap between employees' actual feelings and the organization's prescribed rules. The greater the imbalance, the higher the level of emotional labor required.

In the field of education, Lee and Madera (2019) emphasize that teaching involves emotional labor, as it is not merely a professional or technical job, but also requires considerable emotional adjustment during interactions. Brotheridge and Gabriel et al. (2023) reclassify emotional labor into two categories, namely, job-focused emotional labor and employee-focused emotional labor. Job-focused emotional labor states that the normative behaviors employees display to meet job requirements include interpersonal interaction demands (frequency, diversity, intensity, and duration of interactions with customers) and emotional control (expressing positive emotions and suppressing negative emotions). For employee-focused emotional labor, it introduces the process of emotional management that employees engage in, where displaying the required emotions for their work involves surface acting and deep acting.

Lee and Chelladurai (2016) argue that categorizing emotional labor strictly into surface acting and deep acting might overlook employees' spontaneous and genuine emotions. He proposes the inclusion of "genuine expression", which refers to the ability to express authentic internal emotions that align with work requirements. However, distinguishing between genuine expression and genuine emotion is

challenging, so most research on emotional labor primarily focuses on surface acting and deep acting.

Vinson and Underman (2020) further clarify the process of emotional regulation, defining teacher emotional labor as the efforts made by educational workers to adjust, control, or express a variety of emotions in order to adhere to work norms or interact with different individuals, aiming to achieve personal or organizational goals.

Hoffmann (2016) classified emotional labor as surface acting (employees hide their true feelings and display the emotions expected by the organization without genuinely feeling them) and deep acting (employees adjust their internal feelings to align with the organizational expectations, influencing their external emotions accordingly). Zhu (2020) underscores the core of emotional labor as the "effort exerted to manage personal emotions", defining teacher emotional labor as adjusting emotional expressions (suppressing, hiding emotions) to meet organizational goals or personal interests in response to work (teaching, counseling, discipline) or interactive needs (parent-teacher communication).

In this study, teacher emotional labor is defined as "the effort exerted by teachers in the teaching field to disguise external emotions and adjust internal emotions in order to express the emotional appearance expected by the organization and society." The Emotional Labor Scale developed by Hoffmann (2016) is utilized in this study. Based on grounded theory research findings, the scale was designed with two dimensions of educational personnel's emotional labor, comprising 10 items. This study focuses solely on the surface acting and deep acting aspects, utilizing a total of 10 items from the scale. The allocation of items for each dimension is shown in Appendix 1, Part 2.

2.1.2 Theory of Self-Resilience

The term "self-resilience" was introduced by Jurgens and Helsloot (2018), emphasizing individuals with positive personality traits who can face environmental challenges openly and flexibly, and who can self-adjust accordingly. It originates from

Freud's concept of the "self," which suggests that individuals need to control, monitor, and regulate their impulses in order to adapt to societal environments. Individuals with higher levels of self-resilience perceive themselves as decision-makers and controllers in the face of adversity, believing they can resolve conflicts that arise from it. Self-resilience is also considered a personal trait that enables individuals to adapt to environmental stressors and recover from negative experiences. This ability helps mitigate or overcome the harm caused by adversity, enabling individuals to learn from challenges and prepare for future obstacles.

Nahdi et al. (2021) proposed the opposite end of self-resilience as ego brittleness, representing individuals who lack flexibility and are unable to adapt to changing situations; they may break down or struggle to recover from negative experiences. When individuals lack resilience, they tend to respond to stressful situations in a rigid manner, which can lead to maladaptive responses. Self-resilience enables individuals to adapt effectively to unpredictable environments, thereby mitigating anxiety and approaching challenges with a positive and open attitude.

Individuals with self-resilience can exhibit resilience in the face of adversity, bouncing back and recovering despite shocks or injuries, adapting to their environment, and avoiding negative emotions and behaviors. On the other hand, a lack of this ability may hinder successful adaptation to challenges, resulting in negative emotions and behaviors that impede personal development.

Self-resilience is a positive force that enables individuals to respond effectively to environmental pressures, employing flexible problem-solving strategies to resolve conflicts between themselves and their environment. Thus, individuals with high self-resilience tend to approach life with a positive attitude, find meaning, feel confident, and demonstrate insight into their surroundings, making others feel uplifted. Unlike resilience, which refers to an individual's ability, process, or outcome to avoid negative consequences when facing adversity, self-resilience is considered a personality trait rather than a mere interactive process with the environment. As teachers face

diverse roles and increased workloads, self-resilience becomes vital in balancing teaching performance and overcoming teaching challenges. In the ever-changing landscape of education policies and complex educational environments, teachers must cope with immense pressure. Having sufficient self-resilience can help them develop flexible solutions, balance internal and external conflicts, and effectively manage stressors.

In the context of Taiwan's educational field, teachers face various scenarios, including evolving educational policies such as the new curriculum reforms, complex educational environments, and the challenges posed by diverse roles. In such challenging circumstances, having self-resilience becomes crucial for teachers to navigate through pressures, develop adaptive strategies, and maintain a balance between internal conflicts and external demands. This study explores the concept of "self-resilience ability", which is a personality trait and a positive psychological capital of individuals, enabling them to have self-adjustment capabilities to cope with adversity in life. Prolonged work stress among teachers can lead to work fatigue; however, effective self-resilience can help teachers deal with challenges and maintain their physical and mental well-being.

According to Suratman et al. (2021), during the second stage of work fatigue, which involves emotional responses, an individual may experience emotional imbalance, potentially leading to emotional detachment or work avoidance. Possessing self-resilience ability can assist individuals in facing stress with a positive attitude, helping them slow down defensive reactions and reduce the onset of work fatigue. Kim and Yoon (2021), under their Social Competence Model, state that if an individual feels inadequate and incompetent for their job, it can lead to work fatigue. However, having a positive and proactive attitude, coupled with self-resilience, can help individuals believe in their capabilities to overcome difficulties, increase work motivation, and reduce work fatigue.

The concept of self-resilience encompasses the individual’s capacity to

recover from stressors and adversities, as well as to adapt and find new opportunities for growth within these challenges. This construction can be divided into two orientations: recovery and exploration. (Armawi et al., 2021).

Recovery orientation pertains to an individual's ability to return to a state of equilibrium or pre-stress levels swiftly after encountering stress or adversity (Stanley et al., 2018). It encompasses emotional regulation, psychological resilience, and the effective use of positive coping mechanisms. Southwick et al. (2014) have emphasized the role of resilience as a dynamic process that involves not only bouncing back from negative experiences but also learning from them, which can lead to personal growth.

Exploration orientation, on the other hand, relates to the individual's tendency to seek new possibilities and opportunities in the face of adversity (Song & Kim, 2020). This orientation is characterized by curiosity, openness, and creative thinking, promoting cognitive flexibility and personal development even in adverse conditions.

Empirical studies have reinforced these theoretical frameworks. For instance, studies have linked effective emotional regulation strategies to enhanced recovery after stress, with social support acting as a crucial buffer. In terms of exploration orientation, cognitive flexibility has been associated with better adaptation to changing circumstances and innovative problem-solving (Kartalidis et al., 2021).

In summary, self-resilience is recognized as a multifaceted construct, where recovery orientation and exploration orientation work in tandem to foster an individual's ability to withstand and flourish despite adversity. Further research is encouraged to elucidate the interplay between these orientations and to develop interventions that effectively bolster resilience at both personal and community levels.

In this study, teacher self-resilience ability is defined as "the characteristics teachers possess to adapt to teaching challenges and the ability to recover themselves when faced with difficulties. This enables them to sustain their enthusiasm for education and progress towards their ideal teaching goals." The Self-Resilience Trait

Scale, developed by Kim et al. (2023), is utilized. The scale focuses on two dimensions of self-resilience ability with 8 items designed for measurement. The allocation of items for each dimension is shown in Appendix 1, Part 3.

2.1.3 Theory of Social Support

Cohen and McKay (1984) proposed attachment theory, which suggests that individuals use attachment behaviors to interact with others and maintain intimate relationships to gain a sense of security. To meet their emotional needs and reduce their anxiety, individuals seek support from important others through attachment behaviors. Therefore, a positive attachment relationship can help individuals establish emotional connections and provide them with a sense of security, reducing feelings of anxiety and unease in the face of life difficulties or stress. The concept of social support, introduced by the National Academies of Sciences (2019), refers to the positive feedback individuals receive when interacting with others, including emotional, material, and cognitive forms. These feedback mechanisms can help individuals alleviate the impact of life stressors and enhance personal adaptation. When individuals are in a fluctuating or crisis-ridden environment, social support can provide a protective or buffering function. Aveyard (2023) defines social support as originating from an individual's "primary group", which includes important individuals such as family members, friends, neighbors, and colleagues. Saltzman et al. (2020) classified social support into three types: emotional support, self-esteem support, and social network support.

Grey et al. (2020) categorize social support types into four categories, namely emotional support (care and trust), instrumental support (financial assistance), informational support (advice), and appraisal support (affirmation and feedback). He also categorizes social support sources into support at work and outside of work. Work-related support comes from colleagues, supervisors, and other professionals, while non-work-related support comes from family, friends, neighbors, and other acquaintances. He also proposed that social support has two effects, namely a direct effect and a buffering effect. The direct effect refers to social support's ability to promote

individuals' physical and mental health and alleviate the negative impact of stress, indicating that it can enhance an individual's well-being in these areas. The buffering effect refers to the ability of social support to mitigate the impact of work stress on individuals' physical and mental health by regulating the effects of stress. The buffering effect of social support is only effective when individuals are under stress.

Alnazly et al. (2021) add self-esteem support, evaluative support, belongingness support, and tangible support. Ye et al. (2020) suggest that increasing social support not only helps individuals reduce the level of conflict resulting from stressful events but also contributes to increased happiness. They also stated that social support has the following functions: a) intervening between stress and the situation to reduce or prevent crises; b) providing experiences in dealing with stress to offer problem-solving methods; c) reducing the impact of stress on life; d) increasing physiological and psychological health.

Thorne et al. (2019) suggest that social support sources encompass both formal support within interpersonal networks (e.g., professionals, government, or civil organizations) and informal support (e.g., family, relatives, friends, and colleagues). Chen (2021) believes that providers of social support mainly come from an individual's social network, assisting people in problem-solving or providing psychological support. Masterson et al. (2022) suggest that such social networks, centered on individuals, consisting of varying degrees of interpersonal relationships ranging from close to distant and intimate to distant, can meet individuals' needs at different levels. Kadambi et al. (2020) define social support as the receipt of emotional, spiritual, or practical assistance from others to mitigate the impact of stress on physical and mental well-being, thereby enhancing overall health and life satisfaction. Cao et al. (2021) incorporate the sources of social support into the definition of social support, referring to the various forms of support and care provided by an individual's social network, such as family members, colleagues, friends, or mentors, when facing setbacks or crises. This support helps individuals feel comforted and recognized for their self-

worth, reduces mental and physical anxiety, and ultimately enhances their sense of happiness.

According to the definition of social support, it can be seen that the surrounding environment provides individuals with appropriate assistance and care, which enhances their physical and mental health and equips them with resources to face challenges. Therefore, this study summarizes the following theories of social support proposed by scholars in order to understand the functions of social support further:

In this study, teacher social support is defined as "the emotional, informational, and substantive assistance provided by individuals in a teacher's social network to help them face and resolve teaching challenges, reduce stress, and promote the overall well-being of teachers (Fu et al., 2022). Social Support Theory is used in this study. The scale focuses on two dimensions, direct effect and buffering effect, with a total of 18 measurement items. The detail of each dimension is shown in Appendix 1, Part 4.

2.1.4 Theory of Work Fatigue

Work fatigue is a growing problem in today's work environment. Many individuals work extended hours, which contributes to the risk of succumbing to work fatigue. There are many reasons why work fatigue can be hazardous. It can influence physical health, mental well-being, and social life. Work fatigue is a common side effect of working excessively for prolonged periods. Work fatigue can significantly impact both physical and mental well-being (Reinfeld, 2024).

There are different types of work fatigue that an individual may encounter. Three common examples include physical work fatigue, emotional work fatigue, and mental work fatigue.

1. Physical Work Fatigue: Physical work fatigue is the body's response to prolonged or intense physical activity. It can lead to muscular aches and pains, breathlessness, and fatigue. This work fatigue is different than the mental work exhaustion that comes from extended periods of focusing or concentrating on work

tasks, which can lead to difficulties with memory and concentration problems.

2. Emotional Work Fatigue: Emotional work fatigue is a response to prolonged emotional pressure at work, such as stress and anxiety about work. It differs from work-related emotional exhaustion, which occurs when a person feels drained after work due to excessive demands, conflicting demands that are difficult or impossible to reconcile, and a lack of support from supervisors.

3. Mental Work Fatigue: It is work exhaustion that comes from extended periods of focusing or concentrating on work tasks, which can lead to difficulties with memory and concentration problems.

The theory of work fatigue, a temporary decline in work capacity experienced by workers after long hours or high-intensity continuous work, is essentially a natural physiological and psychological response of the human body to adapt to changes in internal and external environments. It is also a wise manifestation of the body's self-protection mechanism, which helps avoid excessive consumption. This fatigue state not only leads to a significant decrease in work efficiency but may also have long-term and far-reaching negative impacts on workers' physical and mental health, including persistent fatigue, emotional fluctuations, and even the potential to trigger a range of occupational diseases. From a theoretical perspective, the formation of work fatigue is not the result of a single factor but rather the interplay of multiple factors. Among them, individual factors such as mental health status, education level, and tolerance for frustration play pivotal roles. Psychological health theory clearly states that individuals with good mental health are often more capable of facing work stress with ease and demonstrating stronger resilience. A higher education level may endow individuals with richer knowledge reserves and stronger self-regulation abilities, enabling them to navigate work challenges more confidently and thereby effectively reducing the incidence of work fatigue (Sprajcer et al., 2021).

Among individual factors, physical health status serves as the foundation, directly determining an individual's ability to endure long hours or high-intensity work.

An individual's mental health status plays a crucial role in shaping their perception of and coping mechanisms for work stress. Education acts as a key, opening broader knowledge horizons and more efficient paths for self-improvement. Tolerance for frustration is vital to maintaining perseverance in the face of difficulties and challenges. The microsystem, referring to the immediate work environment of an individual, such as the warmth of the family atmosphere and the comfort and layout of the office, exerts a non-negligible direct impact on an individual's work status and fatigue levels, despite these environmental factors seeming subtle (Dewanti et al., 2022).

The intermediate system: It consists of multiple intertwined microsystems, forming a higher-level organizational environment, such as a company's corporate culture, management system, team atmosphere, and interpersonal relationships. These organizational factors not only shape an individual's work experience but also subtly influence their perception of work fatigue. An organizational environment that emphasizes humanistic care and provides reasonable working hours and rest opportunities can undoubtedly greatly alleviate employees' work fatigue, thereby enhancing work efficiency and satisfaction (Lekkas et al., 2022).

The outer system: It encompasses broader external influencing factors, such as community support, government policies, and market competition dynamics. Although these factors do not directly affect an individual's work process, they indirectly impact an individual's work fatigue by influencing working conditions, policy environments, and market opportunities. A stable and supportive external environment can provide individuals with better job security and development space, thereby helping to alleviate work fatigue (Salsabila, 2021).

The macro system: This system consists of broader socio-economic, political, and cultural environmental factors that affect individuals' lives; these factors indirectly exert a profound impact on work fatigue by shaping the values, lifestyles, and work attitudes of society. In a society with economic prosperity, political stability, and cultural inclusivity, individuals often have more development opportunities and better

living conditions, allowing them to invest more enthusiasm and energy into their work and reduce the occurrence of work fatigue (Basalamah et al., 2021).

Johnston et al. (2019) proposed five stages of work fatigue for the helping and service professions, outlining the process of disillusionment with ideals.

(1) Enthusiasm - Refers to the individual's high expectations and full energy when starting a new job, but may overlook the gap between expectations and reality, leading to excessive energy depletion.

(2) Stagnation - Occurs when an individual realizes that the job does not meet their expectations; they slow down, no longer seeing work as their whole life, leading to stagnation.

(3) Frustration - The individual begins to doubt the value of their job and their abilities, developing a sense of tiredness and adverse reactions to the job.

(4) Apathy - The individual reduces their job involvement when facing frustration and avoids new challenges or tasks but is reluctant to leave the job, seeking only to stabilize their position.

(5) Intervention - This stage can occur at any of the above stages to prevent work fatigue from happening. Interventions may include resignation, changing job content, rebuilding interpersonal relationships, and other measures. If intervention strategies are not effective, the individual may become disillusioned with their expectations and ideals, ultimately leading to work fatigue.

Frone and Blais (2019) believe that work fatigue formation includes the following three stages:

Stage One: Job Stress - Refers to a situation in a job context where an individual's resources (energy, abilities, etc.) are insufficient to meet the demands, leading to physical and mental exhaustion and job stress. These demands include internal (the worker's own needs) and external (required by the work environment).

Stage Two: Emotional Reactions (Strain) - When job stress occurs and the individual cannot alleviate it, transient emotional reactions may arise, including mental

tension, physical and mental fatigue, and irritability.

Stage Three: Defensive Coping - When the imbalance of body and mind cannot be alleviated, the individual adopts defensive methods to cope with the situation in the job context. For example, using emotional detachment or withdrawal to avoid work, or facing situations with sarcasm and severity, leading to work fatigue.

According to Hassan et al. (2021), their ecological model proposes that work fatigue is a product of the interaction between individuals and their environment. The environment is one of the causes of work fatigue. The factors that may influence work fatigue include:

Personal factors: Any factors that may influence individual job performance, such as physical and mental health, education level, tolerance for frustration, needs, interests, values, etc.

Microsystem: The smallest organizational ecological system in which individuals perform their work, such as a family or office.

Mesosystem: Higher-level institutional organizations composed of multiple microsystems, such as companies and institutions.

Exosystem: External systems that directly influence workers and company operations, such as communities and governments.

Macrosystem: Factors outside the exosystem that influence an individual's life, such as high unemployment rates, social biases, natural disasters, etc.

The ecological model emphasizes the inseparable relationship between human behavior and the environment. Whether individuals identify with their environment or the long-term impact of the environment on them influences their behavioral performance. When individuals interact with the environment and experience maladjustment in their personal ecological system, work fatigue can occur.

Buunk and Schaufeli (1993), in their Social Competence Model, suggest that work fatigue is not a result that occurs when engaging in helping work. However, it is somewhat related to the individual's perceived competence. Social competence

refers to how individuals interact with their social environment and how they, in turn, influence it. Therefore, work fatigue impacts an individual's perception of their social competence. According to this theory, when individuals perceive themselves as highly effective and competent, they will develop a sense of competence, which in turn enhances their work motivation in a positive cycle. However, suppose individuals perceive their job effectiveness as low. In that case, they will lack a sense of competence, believing they are incapable of performing their job effectively, which can lead to work fatigue.

Zhou et al. (2020), in their Conservation of Resources Theory, propose that individuals strive to retain, protect, and develop the resources they value. Resources include tangible resources (e.g., housing, transportation); life circumstances (e.g., qualifications, seniority, marriage); personal characteristics (e.g., traits, skills); and energy (both external energies, such as financial resources and credit, and internal energy, such as physical, emotional, and cognitive energy). Psychological distress can occur when individuals face the threat of resource loss, experience actual resource loss, or invest resources without receiving returns.

Prapanjaroensin et al. (2017) state that work fatigue can be explained using the conservation of resources theory. Individuals are compared to “energy accounts”. Workloads deplete their energy, but individuals strive to maintain a balance between expenditure and income by replenishing social and mental resources. When the resources consumed by work exceed the replenishment of energy, individuals enter an energy overdraft state, leading to work fatigue. To put it another way, people utilize a variety of their resources to deal with challenges at work. If these resources continue to be depleted without other resources to compensate, stress can have negative consequences, such as emotional detachment and withdrawal, leading to work fatigue. On the other hand, timely supplementation of the required resources can help reduce work pressure.

Lee and Jang (2020) developed a scale for measuring work fatigue called

the "Maslach Work Fatigue Inventory (MBI)", considering work fatigue as a comprehensive phenomenon. This measurement tool has been widely used in modern research, as it enables subsequent studies to be easily implemented and systematized. Lee and Jang (2020) identified three dimensions measured by the Work-Related Fatigue Scale, which align with the developmental stages of work-related fatigue.

(1) Emotional Exhaustion: Individuals cannot handle excessive emotional demands at work, feeling emotionally drained and lacking enthusiasm for work, resulting in extreme fatigue and an inability to cope with work demands. Emotional exhaustion is considered by Dong et al. (2023) as the core concept of work fatigue, being the most evident and best-assessed characteristic.

(2) Low Personal Accomplishment: This dimension refers to individuals feeling that their efforts at work have not been adequately rewarded, leading to a loss of motivation and a significant decrease in feelings of competence and achievement. It is considered a part of self-evaluation in work fatigue, reflecting a sense of powerlessness and loss of productivity.

(3) Depersonalization: After overextending emotions, individuals begin to lose feelings towards the people they serve, adopting a more indifferent and distant attitude, reacting to others without emotions. Depersonalization is regarded as the interpersonal aspect of work fatigue, characterized by individuals exhibiting harmful and indifferent responses towards their work. For teachers, this might manifest as feeling tired in educational work, having difficulty engaging in teaching, handling student issues, interacting with others, feeling low emotionally, and physically exhausted, losing a sense of achievement, finding work meaningless, devaluing oneself, and showing impatience, lack of respect, and empathy towards students or parents.

In this study, work fatigue among teachers is defined as "the inability of teachers to appropriately adjust their own state in the work context, leading to a prolonged state of physical and mental exhaustion and depletion. They exhibit indifference towards people in the school, lack a sense of achievement in their work,

and do not receive adequate internal and external resources, thus lacking enthusiasm for their work." The ecological model of Williams et al. (2000) is applied.

2.2 Related Studies

2.2.1 Demographic Factor

The literature on work fatigue among vocational college teachers often examines various demographic and occupational factors that may contribute to or mitigate the experience of work fatigue. Below is a synthesis of the literature regarding the effects of gender, marital status, age, years of service as an educator, current position at the school, and main subjects taught on work fatigue:

Gender: Research on the relationship between gender and work fatigue in vocational college teachers yields mixed results. Some studies suggest that female teachers may experience higher levels of emotional exhaustion—a key component of work-related fatigue—due to societal expectations and roles that require emotional labor, both within and outside the workplace. Conversely, other studies indicate that male teachers may face their own unique stressors, potentially leading to work fatigue due to societal pressures of being the primary breadwinner or adhering to traditional masculine norms (Hellebaut et al., 2023).

Marital Status: Marital status is another variable explored in the work fatigue literature. Married teachers may have additional support systems through their spouses, which can potentially buffer them against work-related fatigue. However, they may also experience more work-life conflict, which can contribute to work fatigue. Single teachers may have fewer family responsibilities, but they might lack the same level of social support, which could lead to feelings of isolation and subsequently higher work fatigue rates (Cañadas-De la Fuente et al., 2018).

Age: The impact of age on teacher work fatigue is often associated with the stage of a teacher’s career. Younger teachers may experience more work fatigue due to

a lack of experience and limited resources to handle the job's stresses effectively. In contrast, older teachers might experience less work fatigue due to accumulated experience and coping strategies. However, they may also face challenges in keeping up with changing educational demands, which could contribute to work fatigue (Zysberg & Maskit, 2017).

Years of Service as an Educator: The relationship between years of service and work fatigue appears to follow a U-shaped curve. Novice teachers often report high levels of work fatigue as they adjust to the demands of the profession. Work fatigue may decrease with experience as teachers develop more effective classroom management and teaching strategies. However, work fatigue may increase again in teachers who have been in the profession for many years due to stagnation, lack of advancement, or accumulated stress over time (Gillet et al., 2022).

Current Position at the School: The current position can significantly impact work fatigue levels. For instance, teachers with administrative responsibilities might experience higher work fatigue due to increased workload and responsibility. On the other hand, those in leadership positions may have more autonomy and support, which can protect against work fatigue. Teachers without administrative duties may experience less stress related to organizational politics, but they could still feel undervalued or powerless, which can contribute to work fatigue (Jomuad et al., 2021).

Main Subjects Currently Taught: The subject matter taught can also influence work fatigue rates. Teachers of subjects with high-stakes exams may experience increased pressure and stress, resulting in higher levels of work-related fatigue. Additionally, subjects that require ongoing professional development to stay current with industry trends could contribute to the stress and work fatigue of vocational college teachers (Martin, 2023).

In conclusion, work fatigue among vocational college teachers is a multifaceted issue influenced by a range of demographic and occupational factors. Each factor can interact with others in complex ways, making it challenging to predict the

outcomes of work fatigue. Addressing teacher work fatigue requires comprehensive strategies that consider individual characteristics, job demands, and the broader educational context. Future research should continue to explore these dynamics and identify interventions that can support teacher well-being and retention in vocational education settings.

2.2.2 Emotional Labor

Lee and Madera (2019) found that the stronger the emotional labor exertion by preschool teachers, the more intense their feelings of work fatigue. Most negative outcomes of work fatigue are associated with surface acting, whereas positive outcomes are linked to deep acting. It is apparent that surface acting and deep acting have different effects on work fatigue and should be investigated separately. Kariou et al. (2021) viewed emotional labor as a form of mental energy consumption, showing a positive correlation between the degree of mental energy consumption and work fatigue. However, a study by Liu et al. (2016) on public health personnel found a negative correlation between emotional labor and work fatigue. The researchers proposed that the nature of public service systems allows for effective management of employees' diverse emotions through education and training. Therefore, an increase in emotional labor does not necessarily lead to an increase in work fatigue.

Zhang (2021) found that the higher the perceived emotional labor among elementary school teachers, the lower their sense of work fatigue. However, surface acting within emotional labor can positively predict emotional exhaustion; this may be because surface acting causes teachers to hide their genuine emotions, leading to emotional dissonance and exhaustion. Deep acting, on the other hand, negatively predicts all three dimensions of work fatigue, suggesting that it does not increase it because it allows teachers to regulate their emotions internally and display appropriate care for students externally.

Su (2019) explored the relationship between emotional labor and work fatigue among teachers, ranging from elementary school to high school, through a meta-

analysis and found that higher emotional labor among teachers is associated with reduced work fatigue. The authors speculated that teachers, due to the significant social responsibilities and expectations associated with their profession, tend to conceal their feelings of work fatigue involuntarily. As a result, there might not be a direct positive correlation between emotional labor and work fatigue.

Based on the above literature review, it is evident that most studies indicate a correlation between emotional labor and work fatigue, with both positive and negative effects. This study adopts the surface acting and deep acting components of emotional labor, as they have different impacts on the outcome of work fatigue.

2.2.3 Self-resilience

Pradhan and Kumar (2021) find that the higher the self-resilience ability, the less severe the feelings of work fatigue among elementary school teachers. Meanwhile, Makateng (2020) pointed out that intern teachers facing challenges during educational internships can use their self-resilience ability to recover, leading to competent and satisfying positive emotions towards the internship experience and fostering expectations for their teaching career. Jurgens and Helsloot (2018) found a positive correlation between self-resilience ability and happiness among college teachers in training. The novelty-seeking and recovery aspects of self-resilience abilities effectively predicted teachers' sense of happiness. Having happiness enables individuals to face life's challenges positively, maintain optimistic emotions, cope effectively with feelings of powerlessness at work, and alleviate work-related fatigue.

Furthermore, Yeganehpour (2023) highlighted the impact of self-resilience ability on teaching efficacy, indicating that higher levels of self-resilience ability among training college teachers correspond to higher teaching efficacy. Teaching efficacy refers to teachers' belief in their ability to influence student learning during instruction. By enhancing their teaching efficacy through self-resilience, teachers can further reduce feelings of fatigue and powerlessness, thereby lowering work-related stress and fatigue.

2.2.4 Social Support

Cohen and McKay (1984) indicate that teachers receive social support primarily from colleagues and administrators within the school system, as well as from family and friends outside the school system. With respect to family support, Ke et al. (2010) found that teachers with family support experience lower levels of work fatigue. Hellfeldt et al. (2020) noted that higher family support is associated with higher positive emotions among teachers. Wong et al. (2022) suggested that informational and emotional support from family helps enhance happiness when early childhood educators face challenges at work. Regarding colleague support, Ke et al. (2010) found that teachers with colleague support experience lower levels of work fatigue. Mischel and Kitsantas (2020) observed that higher colleague support is correlated with more positive emotional responses. In terms of supervisor support, Chen et al. (2020) argued that supervisor emotional support enhances happiness. Capp et al. (2021) found that higher support from immediate supervisors is associated with a reduced perception of role stress among teachers. Regarding student support, Yang (2016) suggested that it aids in emotional management for teachers, resulting in positive emotional adjustment and improved classroom management effectiveness. With reference to parental support, Skaalvik and Skaalvik (2009) stated that a lack of good relations between parents and teachers in middle school, or parental disrespect towards teachers, can lead to teacher burnout.

Wang and Chen (2014) found that social support has a positive impact on an individual's physical and mental health; when individuals receive more social support, their overall well-being improves. Therefore, when teachers have more social support, their physical and mental well-being improves, leading to increased personal happiness. Through emotional support, messages, or practical assistance, individuals can better cope with the impacts of life and work, leading to lower work fatigue. Forster et al. (2020) studied the training of college teachers and found a significant positive correlation between teacher social support and their happiness. This implies that when

teachers receive more social support to alleviate personal stress, they can face challenges with a more positive and proactive attitude, thereby enhancing their sense of happiness. Additionally, Motsabi et al. (2020) discovered that as the level of social support among teachers increases, feelings of work fatigue decrease. When special education teachers receive higher levels of social support, their work-related stress tends to decrease (Dickinson et al., 2023), thereby reducing the likelihood of developing work fatigue.

In summary, through care and assistance from family, colleagues, supervisors, students, and parents, teachers can replenish resources expended due to emotional demands, thereby alleviating emotional exhaustion and maintaining a humanized approach towards work and life. Liu's (2023) social support scale encompasses the various entities that teachers encounter in the school field, providing a comprehensive examination of the current state of social support sources among middle school teachers.

2.2.5 Work Fatigue

Work fatigue refers to a state in which teachers are physically and mentally exhausted, unable to cope with the stress of their job. This study is curious about how teachers evolve from initially embracing education with passion to becoming physically and mentally drained. Therefore, this study organizes the following stages of work fatigue proposed by scholars to understand the developmental process of work fatigue further:

Liu et al. (2016) found that there is no precise sequence or apparent boundary between any two of the first four stages of job burnout, as it depends on various factors, including the individual's psychological state, job content, and environment. Amzat et al. (2021) conducted a study on junior high school teachers and discovered a significant positive correlation between teachers' social support and their sense of well-being. The result implies that the more social support teachers receive, which helps alleviate personal stress, the more likely they are to approach difficulties

with a positive and proactive attitude, thereby enhancing their sense of happiness. Yeh (2017) found that the higher the level of social support teachers receive, the less job burnout they experience.

2.3 General Background of Vocational School Teachers

Vocational school teachers play a crucial role in the educational system, especially in preparing students for specific skills and practical careers. Generally, these teachers range in age from their twenties to their fifties, with a varying gender distribution by region and institution, typically including a balanced proportion of male and female teachers. They come from diverse cultural and socio-economic backgrounds, which not only influence their teaching styles but also their interactions with students.

In terms of educational and professional backgrounds, vocational school teachers usually possess a wide range of qualifications, from bachelor's degrees to advanced degrees, with many having undergone specialized training or certification related to technical education and vocational training. They often have substantial industry experience, which enables them to bring practical, hands-on knowledge into the classroom and enhance the relevance and applicability of their instruction. To stay current with industry advancements and educational reforms, teachers are required to engage in continuous professional development, including attending workshops, pursuing further studies, and participating in industry placements.

Despite their multiple roles in teaching, mentoring, and administration, vocational school teachers face numerous challenges, such as heavy workloads, emotional labor, and limited resources. Frequent educational reforms and curriculum changes necessitate that they adapt quickly, often without sufficient support or training. Feelings of overwhelm and emotional exhaustion can result from this constant need for adaptation. Therefore, understanding the background and challenges faced by

vocational school teachers is crucial for addressing issues related to occupational work fatigue and enhancing their professional well-being. This knowledge not only helps in formulating policies and practices to support teachers but also improves the overall quality of vocational education.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

This study focuses on training college teachers as its research subjects. Based on the research motivation, background, and objectives of this study, the researcher aims to investigate the impacts of demographic factors, emotional labor, self-resilience, and social support on work fatigue among vocational college teachers. This study employed a quantitative method that relies on the use of questionnaires.

3.2 Population and Sample

3.2.1 Population

The target population of this study consisted of teachers working in the six vocational technical colleges: Wuxi Vocational Technical College, Zibo Vocational College, Guangdong Light Industry Vocational Technical College, Jinhua Vocational and Technical College, Yellow River Water Conservancy Vocational Technical College, and Shenzhen Information Vocational Technical College. The total number of students at these six colleges is 59,400, as detailed on the school's official website (July 2024).

Table 3.1 Number of Students of 6 Vocational Technical Colleges

Name of Vocational Technical College	No. of Students
Wuxi Vocational Technical College	12,000
Zibo Vocational College	8,500
Guangdong Light Industry Vocational Technical College	10,200
Jinhua Vocational and Technical College	9,800
Yellow River Water Conservancy Vocational Technical College	7,400
Shenzhen Information Vocational Technical College	11,500
Total	**59,400**

3.2.2 Samples

The sample collection for this study was conducted at the above-mentioned six colleges: Wuxi Vocational Technical College, Zibo Vocational College, Guangdong Light Industry Vocational Technical College, Jinhua Vocational and Technical College, Yellow River Water Conservancy Vocational Technical College, and Shenzhen Information Vocational Technical College. Based on the assumption that the number of teachers is related to the number of students. The total number of students, therefore, can be used as the total population in this study.

Under the formula of Yamane (1967), that is, $n = \frac{N}{(1+N)(e^2)}$ Where n represents the sample size, *N* is the total number of the population, and e is the sampling error at the critical level of 0.05, it is evident that when the population size (N) is 59,400 units, the sample size (n) is approximately 400 units. However, to make it more convenient and more precise, 420 samples, or 70 samples per college, were decided.

3.2.3 Sampling Methods

This study employed a three-stage random sampling method. The first stage was the cluster random sampling by choosing 6 vocational technical colleges, that is, the Wuxi Vocational Technical College, the Zibo Vocational College, the Guangdong Light Industry Vocational Technical College, the Jinhua Vocational and Technical College, the Yellow River Water Conservancy Vocational Technical College, and the Shenzhen Information Vocational Technical College. In the second stage, 70 samples were fixed for each college, totaling 420 samples. The third stage was a simple random sampling method to ensure that every faculty member had an equal chance of being selected. This method not only ensures the diversity and representativeness of the samples but also provides a solid foundation for the reliability of data analysis and conclusions.

3.3 Data Collection

Data for this study were collected through an online survey. The survey questionnaire was designed to gather information on various aspects, including emotional labor, self-resilience, social support, and work fatigue. To distribute the questionnaire, the “Wenlianxing” online survey platform was used. Potential participants access the survey via a web link or other convenient online methods, allowing respondents to complete the questionnaire electronically.

3.4 Research Instrument

This study aims to explore the influences of emotional labor, self-resilience, and social support on work fatigue among college teachers in training. This study employed a questionnaire survey as a research tool. A questionnaire survey is a research method in which researchers utilize controlled scales to investigate issues and acquire reliable information. The process involved constructing the final questionnaire and distributing and collecting it through web links. The questionnaire comprised five main sections: demographic factors (Part 1), emotional labor (Part 2), self-resilience (Part 3), social support (Part 4), and work fatigue (Part 5). The details of these questionnaires are shown in Appendix 1.

3.5 Content Validity and Reliability

3.5.1 Content Validity

The validity of the questionnaire was tested using IOC (Item-Objective Congruence), a quantitative method that measures the judgments of content experts on the items to assess the fit between the test items and the normative table. Content validity was examined by three experts, including university professors from three different colleges. The content and measurement of the questions were evaluated to

ensure they covered and completed the study. Experts were required to rate the questionnaire as follows.

+1: The question is consistent with the content of the measurement objective.

0: Not sure if the question is consistent with the content of the measurement objective.

-1: The question is not consistent with the content of the measurement objective.

The results of all expert evaluations were used to calculate the IOC index according to the formulas of Rovinelli and Hambleton (1977) as follows:

$$IOC = \Sigma R/N$$

ΣR = total rating score from all experts for each question

N = number of experts

If the calculated IOC index is greater than or equal to 0.5, it is considered that the questions are measured in accordance with the research objectives; hence, the questions are chosen. If any question has a value that does not reach the 0.5 criterion, and it is necessary to use that question, then that question was revised again according to the advice of experts. The details of these IOC results are shown in Appendix 2.

3.5.2 Reliability

Prior to the formal distribution of the questionnaire, a reliability test was conducted using 30 participants to assess the consistency and stability of the questionnaires used in this study. Cronbach's alpha coefficient was calculated to evaluate the internal consistency of the scales. According to Hair et al. (2010), a Cronbach’s alpha value above 0.70 indicates acceptable reliability. The details of this reliability test are shown in Appendix 3.

3.6 Data Analysis

Descriptive statistics and inferential statistics were applied in this study. The details of which are as follows.

3.6.1 Descriptive Statistics

In this study, the absolute frequency and percentage frequency were used to present the demographic factors. To analyze the data on emotional labor, self-resilience, social support, and work fatigue in this study, the absolute frequency, percentage frequency, arithmetic mean, and standard deviation were used.

For the arithmetic mean, the results obtained from emotional labor, self-resilience, social support, and work fatigue do not precisely match the discrete numbers (1, 2, 3, 4, and 5) as classified in the questionnaires. It is calculated in terms of a continuous number with a decimal that must be interpreted in relation to the objective of the questionnaires. According to Best (1981), the criteria for interpreting these means are as follows:

The arithmetic mean of 1.00–1.49 is in the strongly disagree level.

The arithmetic mean of 1.50 – 2.49 is in the disagree level.

The arithmetic mean of 2.50 – 3.49 is in the neutral level.

The arithmetic mean of 3.50 – 4.49 is in the agree level.

The arithmetic mean of 4.50 – 5.00 is in the strongly agree level.

However, in this study, the criteria for interpreting the means were designed to cover all possibilities of results, which include infinite digits, not just two digits as mentioned above. To calculate the mean of the continuous data, there is no gap between the upper-class limit of the first class and the lower limit of the second class. That is, the upper-class limit of the first class should be the same number as the lower limit of the second class. Moreover, the interval between the classes should be constant, which is equal to one in this study (Weiers, 2011).

The arithmetic mean is 0.5, but less than 1.5, which corresponds to the strongly disagree level.

The arithmetic mean of 1.5 but less than 2.5 is in the disagree level.

The arithmetic mean of 2.5, but less than 3.5, is in the neutral level.

The arithmetic mean of 3.5 but less than 4.5 is in the agree level.

The arithmetic mean of 4.5 but less than or equal to 5.5 is in the strongly agree level.

3.6.2 Inferential Statistics

In terms of inferential statistics, numerous statistics were applied according to the hypothesis.

H_1: Differences in demographic factors generate differences in work fatigue of vocational college teachers.

- Independent samples t-tests were used for the gender comparison.
- A one-way ANOVA was used to examine the effects of marital status, age, work experience, work position, and primary teaching subject.

H_2: Emotional labor positively influences the work fatigue of vocational college teachers.

Multiple Linear Regression Analysis is applied.

H_3: Self-resilience has a positive influence on the work fatigue of vocational college teachers.

- Multiple Linear Regression Analysis is applied.

H_4: Social support positively influences the work fatigue of vocational college teachers.

- Multiple Linear Regression Analysis is applied.

H_5: Emotional labor, self-resilience, and social support positively influence the work fatigue of vocational college teachers.

- Multiple Linear Regression Analysis is applied.

CHAPTER IV

ANALYSIS RESULT

Based on advanced statistical procedures, the data analysis in this study is primarily divided into two categories: descriptive statistics and inferential statistics. Descriptive statistics presented in this chapter include the absolute frequency, percentage frequency, arithmetic mean, and standard deviation. For inferential statistics, statistical methods based on hypothesis testing, including independent samples t-tests, one-way ANOVA, and multiple linear regression analysis, were applied.

4.1 Research Finding (Descriptive Statistics)

4.1.1 Demographic Factors

Table 4.1 The Frequency and Percent Frequency Classified by Demographic Factors

Classification	Frequency	Percent
1. Gender:		
Male	287	68.33
Female	133	31.67
2. Marital Status:		
Single	130	30.95
Married	165	39.29
Divorce	125	29.76
3. Age:		
Not more than 20 years old	25	5.95
21-30 years old	26	6.19
31-40 years old	236	56.19
Above 40 years old	133	31.67
4. Teaching Experiences:		
5 years or less	129	30.71
6-10 years	160	38.10
11-15 years	89	21.19
16-20 years	42	10.00

Classification	Frequency	Percent
5. Current Position:		
Mentor	4	0.95
Full-time teacher	39	9.29
Department head	110	26.19
Principal	245	58.33
Headmaster	22	5.24
6. Main Teaching Subjects:		
Chinese Language	5	1.19
Mathematics	7	1.67
Natural Sciences	134	31.90
Social Studies	74	17.62
Technology	45	10.71
Health and Physical Education	53	12.62
Arts	56	13.33
Integrated Activities	46	10.95
Total	**420**	**100.00**

Based on the demographic analysis presented in Table 4.1, the study sample consists of 420 participants, with a majority being male (68.33%) and a smaller proportion being female (31.67%). In terms of marital status, the highest percentage of participants is married (39.29%), followed by those who are single (30.95%) and divorced individuals (29.76%). The age distribution indicates that many participants are between 31 and 40 years old (56.19%), followed by those over 40 years old (31.67%), those aged 21-30 years old (6.19%), and smaller groups under 20 years old (5.95%). Regarding teaching experiences, most participants have 6-10 years of experience (38.10%), followed by 5 years or less (30.71%), 11-15 years (21.19%), and 16-20 years (10.00%). The distribution of current position shows that a significant number of participants are principals (58.33%), followed by department heads (26.19%), full-time teachers (9.29%), headmasters (5.24%), and mentors (0.95%). The main teaching subjects are predominantly natural sciences (31.90%), followed by social studies (17.62%), arts (13.33%), health and physical education (12.62%), technology (10.71%), integrated activities (10.95%), mathematics (1.67%), and Chinese language (1.19%).

4.1.2 Emotional Labor

Table 4.2 The Descriptive Statistics of Emotional Labor

Classification	N	Mean	Standard	Meaning	Rank
Surface Acting	420	3.7233	0.7187	Agree	1
Deep Acting	420	3.6262	0.7543	Agree	2
Overall	420	3.6748	0.5196	Agree	

Table 4.2 shows that surface acting has a mean of 3.723 and a standard deviation of 0.7187, ranking 1st with an agree level, while deep acting has a mean of 3.626 and a standard deviation of 0.7543, ranking 2nd with an agree level. The overall emotional labor score has a mean of 3.675 and a standard deviation of 0.5196, indicating a general agree level.

4.1.3 Self-resilience

Table 4.3 The Descriptive Statistics of Self-resilience

	N	Mean	Standard	Meaning	Rank
Recovery Orientation	420	3.2310	0.9740	Neutral	2
Exploration Orientation	420	3.4327	0.5843	Neutral	1
Overall	420	3.3319	0.5830	Neutral	

It is evident from Table 4.3 that recovery orientation has a mean of 3.2310 and a standard deviation of 0.974, ranking 2nd with a neutral level, while exploration orientation has a mean of 3.4327 and a standard deviation of 0.584, ranking 1st with a neutral level. The overall self-resilience score has a mean of 3.33185 and a standard deviation of 0.583, indicating a neutral level of self-resilience.

4.1.4 Social Support

Table 4.4 The Descriptive Statistics of Social Support

Classification	N	Mean	Standard	Meaning	Rank
Direct Effect	420	3.4793	0.5352	Neutral	1
Buffering Effect	420	3.0795	0.6274	Neutral	2
Overall	420	3.2794	0.4397	Neutral	

With respect to Table 4.4, the direct effect has a mean of 3.479 and a standard deviation of 0.535, ranking 1st with a neutral level. In contrast, the buffering effect has a mean of 3.079 and a standard deviation of 0.627, ranking 2nd with a neutral level. The overall social support scale score has a mean of 3.279 and a standard deviation of 0.440, indicating a neutral level of support.

4.1.5 Work Fatigue

Table 4.5 The Descriptive Statistics of Work Fatigue

Classification	N	Mean	Standard	Meaning	Rank
Physical Work Fatigue	420	3.4003	.5289	Neutral	2
Emotional Work Fatigue	420	3.1929	.5905	Neutral	3
Mental Work Fatigue	420	3.4282	.4710	Neutral	1
Overall	420	3.3394	.3445	Neutral	

Table 4.5 reveals that mental work fatigue has a mean of 3.4282 and a standard deviation of 0.4710, ranking 1st with a neutral level. Physical work fatigue, with a mean of 3.4003, ranks 2nd, indicating a neutral level. Emotional work fatigue, with a mean of 3.1929 and a standard deviation of 0.5905, ranks 3rd with a neutral level.

4.2 Hypothesis Testing Result (Inferential Statistics)

4.2.1 Differences in Demographic Factors Generate Differences in Work Fatigue

4.2.1.1 Differences in Gender Generate Differences in Work Fatigue

H_0: $\mu 1 = \mu 2$

H_a: $\mu 1 \neq \mu 2$

Table 4.6 The Independent Sample t-test of the Gender Factor

Items	Gender	N	Mean	S.D.	t-value	p-value
Work Fatigue	Male	287	3.3391	0.3519	-0.029	0.977
	Female	133	3.3402	0.3294		

It is evident from Table 4.6 that the p-value of work fatigue with respect to gender is approximately 0.977, which is much greater than the critical value of 0.05. Therefore, we cannot reject the null hypothesis (H0), which states that there is no difference in work fatigue between male and female participants. This suggests that gender differences do not result in significant differences in work fatigue among the participants.

4.2.1.2 Differences in Marital Status Generate Differences in Work Fatigue

H_0: $\mu i = \mu j$

H_a: $\mu i \neq \mu j$ at least one pair where $i \neq j$.

Table 4.7 The One-way ANOVA of Marital Status

Work Fatigue		Sum of Squares	df	Mean Square	F	Sig.
Marital Status	Between Groups	0.303	2	0.151	1.277	0.280
	Within Groups	49.427	417	0.119		
	Total	49.729	419			

According to the results in Table 4.7, it is evident that the significance level (p-value) for marital status in the one-way ANOVA of work fatigue is approximately 0.280, which is much higher than the critical value of 0.05. Therefore, the null hypothesis (H0) cannot be rejected, indicating that differences in marital status do not have a significant impact on work fatigue. Specifically, the sum of squares between groups for marital status is 0.303, with 2 degrees of freedom, resulting in a mean square of 0.151. The sum of squares within groups is 49.427, with 417 degrees of freedom, resulting in a mean square of 0.119. The calculated F-value is 1.277. Hence, marital status does not appear to be a significant factor influencing the levels of work fatigue among the participants.

4.2.1.3 Differences in Age Generate Differences in Work Fatigue

H_0: $\mu i = \mu j$

H_a: $\mu i \neq \mu j$ at least one pair where $i \neq j$.

Table 4.8 The One-way ANOVA of Age

Work Fatigue		Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	0.802	3	0.267	2.274	0.079
	Within Groups	48.927	416	0.118		
	Total	49.729	419			

From Table 4.8, it is evident that the significance level (p-value) for age in the one-way ANOVA of work fatigue is about .079, which is much higher than the critical value threshold. Therefore, the null hypothesis (H0) cannot be rejected at the 5% significance level, indicating that age differences do not generate significant differences in work fatigue.

4.2.1.4 Differences in Working Experiences Generate Differences in Work Fatigue

H_0: $\mu i = \mu j$

H_a: $\mu i \neq \mu j$ at least one pair where $i \neq j$.

Table 4.9 The One-way ANOVA of Working Experiences

Work Fatigue		Sum of Squares	df	Mean Square	F	Sig.
Working Experiences	Between Groups	0.212	3	0.071	0.592	0.620
	Within Groups	49.518	416	0.119		
	Total	49.729	419			

From Table 4.9, it is evident that the significance level (p-value) for working experiences in the one-way ANOVA of work fatigue is 0.620, which is much higher than the critical value of 0.05. Therefore, the null hypothesis (H0), which states that there are no differences in work fatigue across different working experience groups ($\mu i = \mu j$), cannot be rejected. This evidence suggests that differences in working experiences do not result in significant differences in work fatigue. Specifically, the sum of squares between groups for working experiences is 0.212, with 3 degrees of freedom, resulting in a mean square of 0.071. The sum of squares within groups is 49.518, with 416 degrees of freedom, resulting in a mean square of 0.119. The calculated F-value is 0.592. Thus, working experiences do not appear to be a significant factor influencing the levels of work fatigue among the participants.

4.2.1.5 Differences in Working Position Generate Differences in Work Fatigue

H_0: $\mu i = \mu j$

H_a: $\mu i \neq \mu j$ at least one pair where $i \neq j$.

Table 4.10 The One-way ANOVA of Working Positions

Work Fatigue		Sum of Squares	df	Mean Square	F	Sig.
Working Position	Between Groups	0.276	4	0.069	0.579	0.678
	Within Groups	49.454	415	0.119		
	Total	49.729	419			

From Table 4.10, it is evident that the significance level (p-value) for

working position in the one-way ANOVA of work fatigue is 0.678, which is much higher than the critical value of 0.05. Therefore, the null hypothesis (H0) indicates that there are no differences in work fatigue across different working positions ($\mu i = \mu j$) and cannot be rejected. This result suggests that differences in working positions do not lead to significant differences in work fatigue. Specifically, the sum of squares between groups for a working position is 0.276, with 4 degrees of freedom, resulting in a mean square of 0.069. The sum of squares within groups is 49.454, with 415 degrees of freedom, resulting in a mean square of 0.119. The calculated F-value is 0.579. Thus, working position does not appear to be a significant factor influencing the levels of work fatigue among the participants.

4.2.1.6 Differences in Main Teaching Subjects

H0: $\mu i = \mu j$

Ha: $\mu i \neq \mu j$ at least one pair where $i \neq j$.

Table 4.11 The One-way ANOVA of Main Teaching Subjects

Work Fatigue		Sum of Squares	df	Mean Square	F	Sig.
Main Teaching Subjects	Between Groups	4.450	7	0.636	5.784	0.000*
	Within Groups	45.280	412	0.110		
	Total	49.729	419			

Based on the results of the one-way ANOVA presented in Table 4.11, it is evident that there are significant differences in work fatigue across the various main teaching subjects. Specifically, the sum of squares between groups is 4.450 with 7 degrees of freedom, corresponding to a mean square of 0.636. The calculated F-value is 5.784 with a significance level (p-value) of 0.000. Since the p-value is much less than 0.05, we reject the null hypothesis (H0), indicating that there are significant differences in work fatigue for at least one pair of different main teaching subjects. Therefore, it can be concluded that the main teaching subject has a significant impact on work fatigue

levels, warranting further investigation into the differences between specific subjects.

Table 4.12 Multiple Comparisons of Main Teaching Subjects

(I) Main Teaching Subjects	(J) Main Teaching Subjects	Mean	S.D.	p.	Confidence Interval	
Chinese Language	Mathematics	-0.05600	0.194	0.773	-0.376	0.264
	Natural Sciences	0.08967	0.151	0.553	-0.159	0.339
	Social Studies	0.26995*	0.153	0.079	0.017	0.522
	Technology	0.36356*	0.156	0.020	0.106	0.621
	Health and Physical Education	0.06551	0.155	0.673	-0.190	0.321
	Arts	0.20043	0.155	0.196	-0.055	0.456
	Integrated Activities	0.14052	0.156	0.369	-0.117	0.398
Mathematics	Chinese Language	0.05600	0.194	0.773	-0.264	0.376
	Natural Sciences	0.14567	0.129	0.258	-0.066	0.358
	Social Studies	0.32595*	0.131	0.013	0.110	0.542
	Technology	0.41956*	0.135	0.002	0.198	0.642
	Health and Physical Education	0.12151	0.133	0.363	-0.098	0.341
	Arts	0.25643*	0.133	0.054	0.037	0.476
	Integrated Activities	0.19652	0.134	0.145	-0.025	0.418
Natural Sciences	Chinese Language	-0.08967	0.151	0.553	-0.339	0.159
	Mathematics	-0.14567	0.129	0.258	-0.358	0.066
	Social Studies	0.18027*	0.048	0.000	0.101	0.259
	Technology	0.27388*	0.057	0.000	0.180	0.368
	Health and Physical Education	-0.02416	0.054	0.654	-0.113	0.065
	Arts	.11076*	0.053	0.036	0.024	0.198
	Integrated Activities	0.05085	0.057	0.370	-0.043	0.144
Social Studies	Chinese Language	-0.26995*	0.153	0.079	-0.522	-0.017
	Mathematics	-0.32595*	0.131	0.013	-0.542	-0.110
	Natural Sciences	-0.18027*	0.048	0.000	-0.259	-0.101
	Technology	0.09361	0.063	0.136	-0.010	0.197
	Health and Physical Education	-0.20444*	0.060	0.001	-0.303	-0.106
	Arts	-0.06952	0.059	0.237	-0.166	0.027
	Integrated Activities	-0.12942*	0.062	0.038	-0.232	-0.027
Technology	Chinese Language	-0.36356*	0.156	0.020	-0.621	-0.106
	Mathematics	-0.41956*	0.135	0.002	-0.642	-0.198
	Natural Sciences	-0.27388*	0.057	0.000	-0.368	-0.180
	Social Studies	-0.09361	0.063	0.136	-0.197	0.010

(I) Main Teaching Subjects	(J) Main Teaching Subjects	Mean	S.D.	p.	Confidence Interval	
Health and Physical Education	Health and Physical Education	-0.29805*	0.067	0.000	-0.409	-0.187
	Arts	-0.16313*	0.066	0.014	-0.273	-0.054
	Integrated Activities	-0.22303*	0.070	0.001	-0.338	-0.108
	Chinese Language	-0.06551	0.155	0.673	-0.321	0.190
	Mathematics	-0.12151	0.133	0.363	-0.341	0.098
	Natural Sciences	0.02416	0.054	0.654	-0.065	0.113
	Social Studies	0.20444*	0.060	0.001	0.106	0.303
	Technology	0.29805*	0.067	0.000	0.187	0.409
Arts	Arts	0.13492*	0.064	0.034	0.030	0.240
	Integrated Activities	0.07501	0.067	0.262	-0.035	0.185
	Chinese Language	-0.20043	0.155	0.196	-0.456	0.055
	Mathematics	-0.25643*	0.133	0.054	-0.476	-0.037
	Natural Sciences	-0.11076*	0.053	0.036	-0.198	-0.024
	Social Studies	0.06952	0.059	0.237	-0.027	0.166
	Technology	0.16313*	0.066	0.014	0.054	0.273
Integrated Activities	Health and Physical Education	-0.13492*	0.064	0.034	-0.240	-0.030
	Integrated Activities	-0.05991	0.066	0.364	-0.169	0.049
	Chinese Language	-0.14052	0.156	0.369	-0.398	0.117
	Mathematics	-0.19652	0.134	0.145	-0.418	0.025
	Natural Sciences	-0.05085	0.057	0.370	-0.144	0.043
	Social Studies	0.12942*	0.062	0.038	0.027	0.232
	Technology	0.22303*	0.070	0.001	0.108	0.338
	Health and Physical Education	-0.07501	0.067	0.262	-0.185	0.035
	Arts	0.05991	0.066	0.364	-0.049	0.169

Based on the results of multiple comparisons of the main teaching subjects in Table 4.12, we can identify significant differences between major subjects. Specifically, there is a significant difference between the Chinese Language and Technology subjects, with a mean difference of 0.36356 and a p-value of 0.020. Similarly, there is a significant difference between mathematics and social studies, with a mean difference of 0.32595 and a p-value of 0.013. Additionally, there is a notable difference between natural sciences and social studies, with a mean difference of 0.18027 and a p-value of 0.000. These findings suggest that there are significant

differences in teaching effectiveness and student performance across various major subjects, which warrant further attention and discussion among educators and policymakers.

4.2.2 Emotional Labor Influence on Work Fatigue

H_0: $\beta_i = 0$

H_a: $\beta_i \neq 0$ (i=1, 2)

The multiple linear regression analysis is applied in this study.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where Y = Work Fatigue

X_1 = Surface Acting

X_2 = Deep Acting

ε = Error term

The results obtained from the multiple linear regression analysis are presented in terms of the predicted value of Y ($\hat{Y}$) shown in equation (1) and in Table 4.13.

$$\hat{Y} = 2.359 + 0.230X_1 + 0.034X_2 \text{……..(1)}$$

(0.000) (0.000) (0.082)

Adjusted $R^2 = 0.232$

Table 4.13 The Multiple Linear Regression Analysis of Emotional Labor

Model		Coefficient			t-value	p-value
		Unstandardized Coefficients		Standardized Coefficients Beta		
		B	Std. Error			
1	Constant	2.359	0.106		22.350	0.000*
	X_1 = Surface Acting	0.230	0.021	0.480	11.202	0.000*
	X_2 = Deep Acting	0.034	0.020	0.075	1.746	0.082

Dependent Variable: Work Fatigue

It is evident from Table 4.13 that, at the 0.05 critical level, only surface acting has a positive influence on work fatigue, with a coefficient of approximately 0.23. In contrast, deep acting (p = 0.080) is not found to influence work fatigue. The adjusted R^2 value of 0.232 suggests that approximately 23.2% of the variance in work fatigue can be explained by these two variables. Surface acting has a standardized coefficient (Beta) of 0.480, indicating a substantial effect size, whereas deep acting has a much smaller influence with a Beta of 0.075.

4.2.3 Self-Resilience Influence on Work Fatigue

H_0: $\beta_i = 0$

H_a: $\beta_i \neq 0$ (i=1, 2)

The multiple linear regression analysis is applied in this study.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where Y = Work Fatigue

X_1 = Recovery Orientation

X_2 = Exploration Orientation

ε = Error term

The results obtained from the multiple linear regression analysis are presented in terms of the predicted value of Y ($\hat{Y}$) shown in equation (2) and in Table 4.14.

$$\hat{Y} = 1.658 + 0.148X_1 + 0.350X_2 \text{.....(2)}$$

(0.000) (0.000) (0.000)

Adjusted $R^2 = 0.557$

Table 4.14 The Multiple Linear Regression Analysis of Self-resilience

Model		Coefficient				
		Unstandardized Coefficients		Standardized Coefficients Beta	t-value	p-value
		B	Std. Error			
1	Constant	1.658	0.075		22.229	0.000*
	X_1=Recovery Orientation	0.148	0.012	0.419	12.853	0.000*
	X_2=Exploration Orientation	0.350	0.019	0.594	18.224	0.000*

Dependent Variable: Work Fatigue

The regression analysis in equation (2) and in Table 4.14 demonstrates that both recovery orientation and exploration orientation significantly and positively impact work fatigue, with p-values of 0.000 for both variables, indicating strong statistical significance. The adjusted R^2 value of 0.557 suggests that approximately 55.7% of the variance in work fatigue is explained by these two factors. Exploration orientation has a larger effect with a standardized coefficient (Beta) of 0.594, compared to recovery orientation, which has a Beta of 0.419. This suggests that an exploration orientation has a more substantial influence on work fatigue than a recovery orientation.

4.2.4 Social Support Influence on Work Fatigue

H_0: $\beta_i = 0$

H_a: $\beta_i \neq 0$ (i=1, 2)

The multiple linear regression analysis is applied in this study.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where Y = Work Fatigue

X_1 = Direct Effect

X_2 = Buffering Effect

ε = Error term

The results obtained from the multiple linear regression analysis are presented in terms of the predicted value of Y ($\hat{Y}$) shown in equation (3) and in Table 4.15.

$$\hat{Y} = 1.317 + 0.417X_1 + 0.186X_2 \quad \text{.....(3)}$$

(0.000) (0.000) (0.000)

Adjusted $R^2 = 0.593$

Table 4.15 The Multiple Linear Regression Analysis of Social Support

	Model	Coefficient				
		Unstandardized Coefficients		Standardized Coefficients	t-value	p-value
		B	Std. Error	Beta		
1	Constant	1.317	0.083		15.886	0.000*
	X_1 = Direct Effect	0.417	0.020	0.648	20.601	0.000*
	X_2 = Buffering Effect	0.186	0.017	0.338	10.739	0.000*

Dependent Variable: Work Fatigue

The multiple linear regression analysis in equation (3) and in Table 4.15 reveals that both the direct effect and buffering effect of social support significantly influence work fatigue, with p-values of 0.000. The adjusted R^2 value of 0.593 indicates that these two factors account for 59.3% of the variance in work fatigue. The direct effect has a larger influence, as indicated by a standardized coefficient (Beta) of 0.648, compared to the buffering effect, which has a Beta of 0.338. This indicates that while both effects are important, the direct effect of social support plays a more substantial role in mitigating work fatigue.

4.2.5 Emotional Labor, Self-Resilience, and Social Support Influence on Work Fatigue

H_0: $\beta_i = 0$

H_a: $\beta_i \neq 0$ (i=1, 2, 3)

The multiple linear regression analysis is applied in this study.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where Y = Work Fatigue

X_1 = Emotional Labor

X_2 = Self-resilience

X_3 = Social Support

ε = Error

The results obtained from the multiple linear regression analysis are presented in terms of the predicted value of Y ($\hat{Y}$) shown in equation (4) and in Table 4.16.

$$\hat{Y} = 0.873 + 0.189X_1 + 0.182X_2 + 0.356X_3 \text{……..(4)}$$

(0.000) (0.000) (0.000) (0.000)

Adjusted $R^2 = 0.650$

Table 4.16 The Multiple Linear Regression Analysis of Emotional Labor, Self-resilience, and Social Support

Model		Coefficients				
		Unstandardized Coefficients		Standardized Coefficients Beta	t-value	p-value
		B	Std. Error			
1	Constant	0.873	0.097		9.042	0.000*
	X_1 = Emotional Labor	0.189	0.019	0.285	9.760	0.000*
	X_2 = Self-resilience	0.182	0.027	0.308	6.826	0.000*
	X_3 = Social Support	0.356	0.035	0.454	10.059	0.000*

Dependent Variable: Work Fatigue

The multiple linear regression analysis in equation (4) and in Table 4.16 indicates that emotional labor, self-resilience, and social support all significantly influence work fatigue, with p-values of 0.000 for each variable, demonstrating strong statistical significance. The adjusted R^2 value of 0.650 indicates that these three factors

account for 65.0% of the variance in work fatigue. Among these factors, social support has the largest impact, with a standardized coefficient (B) of 0.454, followed by self-resilience (B = 0.308) and emotional labor (B = 0.285). This implies that while all three factors are important, social support plays the most crucial role in affecting work fatigue.

Table 4.17 The Summary Results of Hypothesis Testing

	Not Reject H_0	**Reject H_0**
Hypothesis 1		
1. Gender	0.218	
2. Marital Status	0.280	
3. Age	0.079	
4. Working Experiences	0.620	
5. Working Position	0.678	
6. Main Teaching Subjects		0.000***
Hypothesis 2		
Surface Acting		0.000***
Deep Acting	0.080	
Hypothesis 3		
Recovery Orientation		0.000***
Exploration Orientation		0.000***
Hypothesis 4		
Direct Effect		0.000***
Buffering Effect		0.000***
Hypothesis 5		
Emotional Labor		0.000***
Self-Resilience		0.000***
Social Support		0.000***

CHAPTER V

CONCLUSION AND DISCUSSION

5.1 Conclusion

The results obtained from the descriptive statistics indicate a diverse sample of 420 participants, comprising 68.3% males and 31.7% females. The marital status distribution shows 31.0% single, 39.3% married, and 29.8% divorced. Age-wise, 6.0% are 20 years or younger, 6.2% are between 21 and 30 years old, 56.2% are between 31 and 40 years old, and 31.7% are 50 years or older. Regarding working experience, 30.7% have 5 years or less of work experience, 38.1% have 6-10 years of work experience, 21.2% have 11-15 years of work experience, and 10.0% have 16-20 years of work experience. The working positions include 1.0% mentors, 9.3% full-time teachers, 26.2% department heads, 58.3% principals, and 5.2% headmasters. Natural sciences (31.9%), social studies (17.6%), and arts (13.3%) are the most common teaching subjects. This diverse demographic and professional composition provides a comprehensive framework for further analysis.

In terms of inferential statistics, the key findings are summarized as follows: Gender, marital status, years of service, and current position do not show statistically significant differences in work fatigue; with p-values greater than 0.05; age shows a marginally significant difference with a p-value of 0.05, indicating that different age groups may experience varying levels of work fatigue; the main subjects taught exhibit a statistically significant difference in work fatigue, with a p-value of 0.000. Additionally, there is a significant positive relationship between emotional labor and work fatigue; self-resilience orientations (recovery orientation and exploration orientation) significantly impact work fatigue, and both the direct effect and buffering effect of social support significantly influence work fatigue. These findings suggest that emotional labor, self-resilience orientations, and social support dynamics play crucial

roles in managing work fatigue.

Emotional Labor's Influence on Work Fatigue: The multiple linear regression analysis reveals a significant positive relationship between emotional labor and work fatigue, characterized by a notably high t-value and a p-value of zero for emotional labor. This statistically significant relationship highlights the pivotal role that emotional labor capabilities play in enhancing work fatigue. The findings suggest that individuals who are better at regulating their learning processes, setting personal goals, and adapting their learning strategies in response to feedback tend to be more effective in autonomous learning environments. Therefore, organizations and educational institutions should focus on developing and supporting emotional labor skills to improve the overall effectiveness of autonomous learning, ultimately contributing to enhanced personal and professional development.

Self-Resilience Influence on Work Fatigue: The multiple linear regression analysis reveals that both recovery orientation and exploration orientation significantly contribute to work fatigue, with exploration orientation having a more substantial impact. While a recovery orientation shows a moderate positive relationship with work fatigue, indicating that individuals focusing on recovery may already experience higher work fatigue levels, an exploration orientation exhibits a strong positive relationship, suggesting that the stress and challenges associated with novelty-seeking behaviors significantly increase work fatigue. These findings underscore the importance of considering specific self-resilience orientations in developing targeted interventions to manage work fatigue effectively.

Social Support Influence on Work Fatigue: The multiple linear regression analysis indicates that both the direct and buffering effects of social support significantly influence work fatigue. The direct effect has a strong positive relationship with work fatigue, suggesting that individuals who receive more direct social support may already be experiencing higher levels of work fatigue. The buffering effect also shows a significant positive impact on work fatigue, albeit to a lesser degree, indicating

that while buffering social support helps to some extent, it is still associated with higher levels of work fatigue. These findings highlight the complex dynamics of social support in relation to work fatigue; that is, while social support is crucial, its different facets must be managed carefully to mitigate work fatigue effectively.

5.2 Discussion

5.2.1 Demographic Factors

To support the observations on gender differences and the impact of age on work fatigue, we delve into existing research that sheds light on these dynamics within organizational and educational settings.

Based on inferential statistical analysis, the key conclusions of this study are that gender, marital status, years of service, and current position do not show statistically significant differences in work fatigue, with p-values greater than 0.05. However, age shows a marginally significant difference with a p-value of 0.05, indicating that different age groups may experience varying levels of work fatigue. The main subjects taught exhibit a statistically significant difference in work fatigue, with a p-value of 0.000. Additionally, a significant positive relationship exists between emotional labor and work fatigue. Self-resilience orientations (recovery orientation and exploration orientation) have a significant impact on work fatigue, and both the direct effect and the buffering effect of social support significantly influence work fatigue. These findings suggest that emotional labor, self-resilience orientations, and social support dynamics play crucial roles in managing work fatigue.

Gender, Marital Status, and Years of Service: Cañadas-De la Fuente et al. (2018) found that gender, marital status, and children are significant risk factors for work fatigue among nurses. Despite this, the current study did not show statistically significant differences in these areas among teachers, perhaps indicating profession-specific dynamics in fatigue experiences.

Age and Main Subjects Taught: The marginal significance of age in the current study aligns with the results presented by Gillet et al. (2022), which show varying trajectories of work fatigue over time, highlighting how age may influence fatigue levels.

Amzat et al. (2021) investigated the role of educational and subject-specific dynamics in contributing to work fatigue, highlighting the significant differences associated with subject matter.

Emotional Labor and Work Fatigue: Grandey (2015) identifies emotional labour as a significant contributor to work fatigue, supporting the current finding of a positive relationship between emotional labour and work fatigue. Hoffmann's (2016) study further elaborates on the complexities of emotional labour in various professional settings, underscoring the importance of managing emotional expressions at work.

Self-Resilience Orientations: Hsieh et al. (2016) discuss how self-resilience, incorporating aspects like recovery and exploration orientations, directly impacts happiness and reduces stress and work fatigue among teachers. Makateng (2020) presents similar findings in other professions, indicating that self-resilience is a crucial factor in mitigating work fatigue.

Social Support's Direct and Buffering Effects: The importance of social support is well-documented, as highlighted in the works of Wang and Chen (2017), who emphasize its moderating effects on job stress and turnover intentions. Forster et al. (2020) also emphasize how social support can buffer the adverse effects of stress and adversity. Broader Implications: Kariou et al. (2021) provide a systematic review that supports the claim that emotional labour and social support have a significant impact on work fatigue among teachers, reinforcing the current study's findings. The integrative roles of emotional regulation, self-resilience, and social support offer a comprehensive framework for addressing work fatigue, as discussed by Southwick et al. (2014) and Pradhan and Kumar (2021).

These supporting studies converge to affirm that addressing emotional labor,

enhancing self-resilience orientations, and leveraging social support are critical strategies for mitigating work fatigue. Therefore, educational institutions should focus on developing policies and interventions that encompass these dimensions to promote teacher well-being and retention.

5.2.2 Emotional Labor Influence on Work Fatigue

Furthermore, the analysis reveals that self-resilience, characterized by recovery orientation and exploration orientation, significantly impacts work fatigue. The significance levels of these variables indicate that individuals with higher self-resilience are better equipped to cope with work-related stress and fatigue. Specifically, those who are adept at recovering from setbacks and exploring new strategies tend to experience lower levels of work fatigue. This highlights the importance of cultivating resilience among employees and learners, as it directly impacts their capacity to manage stress and maintain productivity.

Moreover, the study identifies the crucial role of social support in mitigating work fatigue. Both the direct effect and the buffering effect of social support on work fatigue are statistically significant. This suggests that having a robust support system not only directly reduces feelings of fatigue but also buffers against the adverse effects of stress. Individuals who perceive higher levels of support from their peers, family, and supervisors are less likely to experience extreme fatigue, highlighting the importance of organizations cultivating a supportive work environment.

Emotional Labor: Grandey (2015) and Hoffmann (2016) support that managing emotional labor effectively is crucial for reducing work fatigue. Their findings emphasize the need for training programs that enhance emotional regulation skills.

Self-Resilience: Hsieh et al. (2016) and Makateng (2020) stress the importance of recovery and exploration orientations in resilience. Their research indicates that individuals with these skills are more effective at managing stress and avoiding burnout.

Social Support: Wang and Chen (2017) and Forster et al. (2020) highlight the buffering effects of social support on work-related stress. Their studies suggest that strong social networks can significantly reduce the impact of stress and fatigue.

5.2.3 Self-Resilience Influence on Work Fatigue

In addition to the significant contributions of recovery orientation and exploration orientation, the analysis also emphasizes the pivotal role of emotional labor in work fatigue. The strong positive relationship between emotional labor and work fatigue, as indicated by the high t-value and p-value of zero, highlights the critical need for individuals to develop effective emotional regulation skills. This relationship reflects the demands placed on individuals to manage their emotional expressions during interactions, which can exacerbate feelings of fatigue if not correctly managed.

Furthermore, the buffering and direct effects of social support on work fatigue present a compelling case for implementing robust support systems within organizations. The statistically significant relationships suggest that social support can reduce the direct impact of work-related stressors and provide additional resilience against fatigue. This dual effect of social support highlights its unique capacity to enhance overall well-being and mitigate the negative consequences associated with high work demands.

Recovery and Exploration Orientations: Hsieh et al. (2016) and Makateng (2020) emphasize the crucial roles of recovery and exploration orientations in fostering self-resilience. Their findings support the current study’s conclusion that self-resilience directly impacts the ability to cope with work fatigue, with exploration-related activities potentially leading to higher stress levels due to the challenges associated with new experiences and learning. Emotional Labor: Grandey (2015) and Hoffmann (2016) emphasize the significant impact of emotional labor on work fatigue. Their research aligns with the current findings, suggesting the need for training programs that focus on emotional regulation and management to reduce the adverse effects of emotionally demanding tasks. Social Support: Wang and Chen (2017) and Forster et al. (2020)

provide evidence of the crucial role of social support in buffering work-related fatigue. Their studies highlight that supportive social environments can significantly alleviate stress and reduce fatigue, reinforcing the importance of cultivating strong support networks in the workplace. Broader Implications: Kariou et al. (2021) demonstrate the intertwined effects of emotional labor and social support on work fatigue among teachers, suggesting that comprehensive strategies addressing both aspects are essential for effective fatigue management. Southwick et al. (2014) and Pradhan & Kumar (2021) offer frameworks that integrate emotional regulation, resilience, and social support, providing a holistic approach to reducing work fatigue.

5.2.4 Social Support Influence on Work Fatigue

Furthermore, the analysis reveals intricate details about how different aspects of social support interact with work fatigue. The strong positive relationship between the direct effect of social support and work fatigue suggests that individuals who seek or receive more immediate and hands-on support from their peers, family, and supervisors may do so in response to already high levels of fatigue. This could imply that while such direct support is crucial, it might not be sufficient to fully alleviate fatigue without addressing underlying stressors.

Similarly, the buffering effect of social support exhibits a positive relationship with work fatigue, indicating that while it helps mitigate some stress, it does not eliminate the experience of fatigue. This scenario illustrates how supportive environments can help mitigate immediate stress; however, continuous exposure to high work demands still leads to significant fatigue levels over time.

Direct and Buffering Effects of Social Support: Wang and Chen (2017) and Forster et al. (2020) emphasize the role of social support in mitigating work-related stress and fatigue. Their studies align with the current findings, demonstrating that while social support can significantly reduce stress, managing the nuances between direct and buffering support is crucial.

Complex Dynamics of Social Support: Southwick et al. (2014) and Pradhan

& Kumar (2021) discuss the multifaceted roles of social support, outlining how different forms of support—whether direct assistance or emotional buffering—interact with work pressures and personal resilience.

Associated Risks and Benefits: Cañadas-De la Fuente et al. (2018) and Dickinson et al. (2023) offer insights into the complex dynamics of how social support relates to work fatigue, acknowledging that it can both alleviate and paradoxically indicate higher preexisting stress levels.

5.3 Practical Significance of the Research

Reducing the Demands of Emotional Labor: Organizations should acknowledge the substantial impact of emotional labor on employee work fatigue and take steps to mitigate the emotional regulation required in the workplace. This can be achieved through training employees to manage their emotions more effectively or adjusting job requirements to reduce unnecessary emotional labor. This not only helps to lower levels of work fatigue but also improves overall job satisfaction and employee well-being.

Balancing the Development of Self-Resilience: Although self-resilience is generally viewed as a positive trait, the study suggests that highly resilient employees may experience greater stress and work-related fatigue. Therefore, organizations should help employees develop self-resilience in a balanced manner, avoiding the assignment of excessively challenging tasks. Providing adequate rest and recovery time, as well as ensuring a reasonable workload, can prevent employees from experiencing work fatigue due to excessive stress.

Effectively Utilizing Social Support: The study reveals that social support has the greatest impact on work fatigue, indicating that employees experiencing high levels of work fatigue often seek additional support. Hence, organizations should create a supportive working environment that encourages teamwork and mutual assistance

among employees. Management should note that while social support can alleviate work fatigue, it is not a complete solution. Combining different strategies to reduce the incidence of work fatigue fundamentally is crucial.

5.4 Recommendation for Future Research

This research offers valuable insights into the dynamics of work fatigue, emotional labor, self-resilience, and social support, providing practical recommendations that can be applied at various levels, including academic institutions, students, and society as a whole.

Recommendations for the Academy: Academic institutions should prioritize enhancing emotional labor training and developing resilience-building programs for both faculty and students. By incorporating emotional regulation workshops and support systems that focus on recovery and exploration, institutions can significantly reduce work-related fatigue and improve overall employee well-being. Additionally, fostering strong social support networks within the institution, such as peer mentoring and accessible counseling services, will create a collaborative environment that buffers against work-related stress.

Recommendations for Students: Students are encouraged to develop their emotional regulation skills and build resilience by utilizing adaptive learning strategies. By setting personal goals, seeking feedback, and participating in mindfulness practices, students can better manage the emotional demands of their academic journey and reduce the risk of burnout. Engaging in peer support activities, such as study groups and mentoring, will also provide a critical support system that enhances their educational experience and helps manage academic stress.

Recommendations for Society: Society should increase awareness of the impact of emotional labor on work fatigue and actively support the development of resilience programs. Community organizations and workplaces should offer resources

and workshops focused on emotional intelligence and stress management to help individuals cope with the demands of their roles. By fostering a culture of support that values empathy and open communication, society can create environments that significantly reduce work fatigue and promote overall well-being for all individuals.

5.5 Limitations of the Study

The current study explores the relationships between emotional labor, self-resilience, social support, and work fatigue, highlighting the complex interplay among these factors. While providing valuable insights, the study's reliance on self-reported data, its cross-sectional design, and potential limitations in sample diversity suggest the need for further research. Future studies should employ longitudinal methods and diverse samples to understand these dynamics better and develop effective strategies for reducing work fatigue and enhancing employee well-being.

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APPENDICES

APPENDIX 1: QUESTIONNAIRES

Dear Teacher,

Thank you for taking the time to fill out this questionnaire. We appreciate your dedication to children, as you face numerous teaching tasks and responsibilities every day. This survey aims to understand the emotional experiences and levels of fatigue you encounter in your work as an educator. Furthermore, we are interested in learning about your current coping mechanisms for dealing with stress and the level of social support available to you. Through the research findings and recommendations, the researcher aims to support middle school teachers in reducing work-related fatigue and ultimately promoting greater well-being for both teachers and students.

Completing this questionnaire should take approximately 15 minutes to complete. The survey is solely for academic research purposes, and all your personal information and opinions will be kept strictly confidential. Please respond based on your genuine experiences in the educational field. Your cooperation in completing this questionnaire and sharing your valuable insights and experiences is greatly appreciated.

Thank you for your participation!

Part 1: Demographic Factor

1. Gender: □ Male □ Female

2. Marital Status: □ Single □ Married □ Divorce

3. Age: □ Not more than 20 years old □ 21-30 years old □ 31- 40 years old
□ Above 50 years old

4. How many years have you been serving as an educator?
□ 5 years or less □ 6-10 years □ 11-15 years □ 16-20 years

5. What is your current position at the school? (Multiple choices allowed)
□ Mentor □ Full-time teacher □ Department head □ Principal
□ Headmaster

6. What are the main subjects you currently teach? (Multiple choices allowed)
□ Chinese Language □ Mathematics □ Natural Sciences □ Social Studies
□ Technology □ Health and Physical Education □ Arts □ Integrated Activities

Part 2: Emotional Labor State

The following questions aim to understand the efforts you put into managing your emotions and your emotional experiences in the teaching environment. Please mark "√" in the box that corresponds to your true feelings based on the scale provided (1 point represents strongly disagree, 2 points represent disagree, 3 points represent neutral, 4 points represent agree, and 5 points represent strongly agree).

	Question Item		1	2	3	4	5
Surface Acting	1	When questioned by parents about student matters, I will refrain from expressing negative emotions and communicate tactfully.					
	2	I deliberately conceal my negative emotions so that they do not affect my teaching work.					
	3	In situations requiring communication with others for student affairs, even when opinions differ, I will strive to maintain a superficially harmonious relationship.					
	4	I am quite impatient, but I still manage to show a patient expression towards students.					
	5	When I am feeling down, I remind myself to adjust my mood and try not to let it affect the students.					
Deep Acting	1	Even when my mood is not good, I try to adjust it and outwardly display appropriate emotions.					
	2	Faced with unpleasant events in teaching, I strive to adjust my feelings and consider things from the students' perspective.					
	3	When I am uncomfortable with demands from administrators that are beneficial to students, I try to convince myself sincerely to accept them.					
	4	Even when I am dissatisfied with a student's performance, I try to change my internal cognition and convince myself to express appropriate emotions.					
	5	In challenging situations involving student welfare, I actively seek support and guidance to help regulate my emotions and					

		maintain a positive attitude.					

Part 3: Self-Resilience State

The following questions aim to understand your personal traits and coping abilities in response to stress. Please mark "√" in the box that corresponds to your true feelings based on the scale provided (1 point represents strongly disagree, 2 points represent disagree, 3 points represent neutral, 4 points represent agree, and 5 points represent strongly agree).

	Question Item		1	2	3	4	5
Recovery Orientation	1	I am capable of handling the matters for which I am responsible effectively.					
	2	I can leave a positive impression on others.					
	3	When my close friend is in a negative mood, I take the initiative to comfort them.					
	4	I can tell when my close friend is in a bad mood, even if they do not say anything.					
Exploration Orientation	1	I enjoy dealing with novel and unusual situations.					
	2	I like to change up the ways I do the same thing.					
	3	I am more curious than most people.					
	4	I enjoy exploring new things.					

Part 4: Social Support State

The following questions aim to understand the support you receive from your family, colleagues, parents, and students in terms of emotional or tangible assistance. Please mark "√" in the box that corresponds to your true feelings based on the scale provided (1 point represents strongly disagree, 2 points represent disagree, 3 points represent neutral, 4 points represent agree, and 5 points represent strongly agree).

		Question Item	**1**	**2**	**3**	**4**	**5**
Direct Effect (Support in general)	1	Family members recognize and affirm the effort put into work.					
	2	Parents show care and encouragement when their children face setbacks at work.					
	3	The school assists in communication and resolution with parents.					
	4	Supervisors analyze problems and offer solutions.					
	5	Supervisors show concern and encouragement.					
	6	The school assists in communication and resolution with parents.					
	7	Students cooperate by following rules and interacting politely.					
	8	The school assists in communication and resolution with parents.					
	9	Parents appreciate teaching effectiveness.					
	10	Parents respect and support their children's opinions and ideas.					
Buffering Effect (Support during Stress)	1	Seek guidance from trusted friends and family.					
	2	Family members comfort, encourage, and support during lows at work.					
	3	Colleagues express concern and support when conflicts arise with students.					
	4	The school provides necessary equipment, books, and resources.					
	5	Students express their gratitude and blessings.					
	6	Students express concern and support when conflicts arise.					
	7	Parents acknowledge class management.					
	8	Parents affirm the efforts put into work (which can be both direct and indirect).					

Part 5: Work Fatigue State

The following questions aim to understand your feelings while working as an educator and the challenges you face in your current school environment. Please mark "√" in the box that corresponds to your true feelings based on the scale provided (1 point represents strongly disagree, 2 points represent disagree, 3 points represent neutral, 4 points represent agree, and 5 points represent strongly agree).

		Question Item	1	2	3	4	5
Physical Work Fatigue	1	I have less strength in my muscles.					
	2	The whole body feels tired.					
	3	Legs feel tired/heavy.					
	4	My shoulder feels stiff or painful.					
	5	Feel stiff in the legs and arms.					
	6	My body movement slows down.					
	7	My arms/legs feel numb.					
	8	I feel cramps in my muscles.					
	9	My joints feel achy.					
Emotional Work Fatigue	1	My motivation is lower when I am fatigued.					
	2	Exercise brings me fatigue.					
	3	I am easily fatigued.					
	4	Fatigue interferes with my physical function.					
	5	Fatigue causes frequent problems for me.					
	6	My fatigue prevents sustained physical functioning.					
	7	Fatigue interferes with the ability to carry out certain duties and responsibilities.					
	8	Fatigue is among my three most disabling symptoms.					
	9	Fatigue interferes with my work, family life, and social activities.					
Mental Work Fatigue	1	Thinking requires effort.					
	2	My thoughts easily wander.					
	3	Lacking in energy					
	4	Yawning					
	5	My eyes feel strained.					
	6	Hearing ability is reduced.					
	7	My mind feels clear (positive question).					

APPENDIX 2: THE VALIDITY OF THE QUESTIONNAIRES

(IOC RESULTS)

IOC on Emotional Labor			Expert 1	Expert 2	Expert 3	IOC index
Surface Acting	1	When questioned by parents about student matters, I will refrain from expressing negative emotions and communicate tactfully.	1	1	1	1
	2	I deliberately hide my negative emotions, so they do not influence my teaching.	1	1	1	1
	3	In situations requiring communication with others for student affairs, even when opinions differ, I will strive to maintain a superficially harmonious relationship.	0	1	1	0.67
	4	I am quite impatient, but I still manage to show a patient expression towards students.	1	1	1	1
	5	When I am feeling down, I remind myself to adjust my mood and try not to let it influence the students.	1	1	1	1
Deep Acting	1	Even when my mood is not good, I try to adjust it and outwardly display appropriate emotions.	1	1	1	1
	2	Faced with unpleasant events in teaching, I strive to adjust my feelings and consider things from the students' perspective.	0	1	1	0.67
	3	When I am uncomfortable with demands from administrators that are beneficial to students, I try to convince myself sincerely to accept them.	1	1	1	1
	4	Even when I am dissatisfied with a student's performance, I try to change my internal cognition and convince myself to express appropriate emotions.	1	1	1	1
	5	In challenging situations involving student welfare, I actively seek support and guidance to help regulate my emotions and maintain a positive attitude.	1	1	1	1

IOC on Self-Resilience			Expert 1	Expert 2	Expert 3	IOC Index
Recovery Orientation	1	I can handle the matters for which I am responsible well.	0	1	1	0.67
	2	I can leave a good impression on others.	1	1	1	1
	3	When my close friend is in a bad mood, I take the initiative to comfort them.	1	1	1	1
	4	I can tell when my close friend is in a bad mood, even if they do not tell me.	1	1	1	1
Exploration Orientation	1	I enjoy dealing with novel and unusual situations.	1	1	1	1
	2	I like to change up the ways I do the same thing.	1	1	1	1
	3	I am more curious than most people.	1	1	1	1
	4	I enjoy exploring new things.	1	1	1	1
IOC on Social Support			**Expert 1**	**Expert 2**	**Expert 3**	**IOC Index**
Direct Effect	1	Family members recognize and affirm the effort put into work.	1	1	1	1
	2	Parents provide care and encouragement when their children face setbacks at work.	1	1	1	1
	3	The school assists in communication and resolution with parents.	1	1	1	1
	4	Supervisors analyze problems and offer solutions.	0	1	1	0.67
	5	Supervisors show concern and encouragement.	1	1	1	1
	6	The school assists in communication and resolution with parents.	1	1	1	1
	7	Students cooperate by following rules and interacting politely.	1	1	1	1
	8	The school assists in communication and resolution with parents.	1	1	1	1
	9	Parents appreciate teaching effectiveness.	1	1	1	1
	10	Parents respect and support their children's opinions and ideas.	1	1	1	1
Buffering Effect	1	Seek guidance from trusted friends and family.	1	1	1	1
	2	Family members comfort, encourage, and support me during my low points at work.	1	1	1	1
	3	Colleagues express concern and support when conflicts arise with students.	1	1	1	1
	4	The school provides necessary equipment, books, and resources.	0	1	1	0.67
	5	Students expressed their gratitude and blessings.	1	1	1	1
	6	Students express concern and support when conflicts arise.	1	1	1	1

	7	Parents acknowledge class management.	1	1	1	1
	8	Parents affirm the efforts put into work (which can be both direct and indirect).	1	1	1	1
IOC on Work Fatigue			**Expert 1**	**Expert 2**	**Expert 3**	**IOC Index**
Physical Fatigue	1	I have less strength in my muscles.	1	1	1	1
	2	The whole body feels tired.	1	1	1	1
	3	Legs feel tired/heavy.	1	1	1	1
	4	My shoulder feels stiff or painful	0	1	1	0.67
	5	Feel stiff in the legs and arms.	1	1	1	1
	6	My body movement slows down.	1	1	1	1
	7	My arms/legs feel numb.	1	1	1	1
	8	I feel cramps in my muscles.	0	1	1	0.67
	9	My joints feel achy.	1	1	1	1
Emotional Fatigue	1	My motivation is lower when I am fatigued.	1	1	1	1
	2	Exercise brings me fatigue.	1	1	1	1
	3	I am easily fatigued.	1	1	1	1
	4	Fatigue interferes with my physical function.	0	1	1	0.67
	5	Fatigue causes frequent problems for me.	1	1	1	1
	6	My fatigue prevents sustained physical functioning.	1	1	1	1
	7	Fatigue interferes with the ability to carry out certain duties and responsibilities.	1	1	1	1
	8	Fatigue is among my three most disabling symptoms.	0	1	1	0.67
	9	Fatigue interferes with my work, family life, and social activities.	1	1	1	1
Mental Fatigue	1	Thinking requires effort.	1	1	1	1
	2	My thoughts easily wander.	0	1	1	0.67
	3	Lacking in energy	1	1	1	1
	4	Yawning	1	1	1	1
	5	My eyes feel strained.	1	1	1	1
	6	Hearing ability is reduced.	0	1	1	0.67
	7	My mind feels clear (positive question).	1	1	1	1

APPENDIX 3: THE RELIABILITY OF THE QUESTIONNAIRES

Classification	Item		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Surface Acting	1	When questioned by parents about student matters, I will refrain from expressing negative emotions and communicate tactfully.	.358	.700	.707
	2	I deliberately hide my negative emotions so as not to influence my teaching work.	.247	.741	
	3	In situations requiring communication with others for student affairs, even when opinions differ, I will strive to maintain a superficially harmonious relationship.	.589	.622	
	4	I am quite impatient, but I still manage to show a patient expression towards students.	.576	.609	
	5	When I am feeling down, I remind myself to adjust my mood and try not to let it influence the students.	.635	.594	
Deep Acting	1	Even when my mood is not good, I make an effort to adjust it and outwardly display appropriate emotions.	.780	.826	.873
	2	Faced with unpleasant events in teaching, I strive to adjust my inner feelings and consider things from the students' perspective.	.388	.921	

Classification	Item		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	3	When I am uncomfortable with demands from administrators that are beneficial to students, I try to convince myself sincerely to accept them.	.858	.812	
	4	Even when I am dissatisfied with a student's performance, I make an effort to change my internal cognition and convince myself to express appropriate emotions.	.774	.827	
	5	In challenging situations involving student welfare, I actively seek support and guidance to help regulate my emotions and maintain a positive attitude.	.767	.829	
Classification	**Item**		**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**	**Cronbach's Alpha**
Recovery Orientation	1	I am capable of handling the matters for which I am responsible effectively.	.678	.770	.824
	2	I can leave a positive impression on others.	.338	.911	
	3	When my close friend is in a bad mood, I take the initiative to comfort them.	.855	.700	
	4	I can tell when my close friend is in a bad mood, even if they do not tell me.	.829	.697	
Exploration Orientation	1	I enjoy dealing with novel and unusual situations.	.727	.727	.818

Classification	Item		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	2	I like to change up the ways I do the same thing.	.405	.863	
	3	I am more curious than most people.	.665	.759	
	4	I enjoy exploring new things.	.780	.699	
Classification	**Item**		**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**	**Cronbach's Alpha**
Direct Effect	1	Family members recognize and affirm the effort put into work.	.641	.827	.850
	2	Parents show care and encouragement when their children face setbacks at work.	.679	.827	
	3	The school assists in communication and resolution with parents.	.618	.831	
	4	Supervisors analyze problems and offer solutions.	.604	.832	
	5	Supervisors show concern and encouragement.	.652	.829	
	6	The school assists in communication and resolution with parents.	.712	.823	
	7	Students cooperate by following rules and interacting politely.	.680	.823	
	8	The school assists in communication and resolution with parents.	.439	.845	
	9	Parents appreciate teaching effectiveness.	.232	.861	
	10	Parents respect and support their children's opinions and ideas.	.355	.853	
Buffering Effect	1	Seek guidance from trusted friends and family.	.266	.807	.799
	2	Family members comfort, encourage, and support during lows at work.	.662	.749	

Classification	Item		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	3	Colleagues express concern and support when conflicts arise with students.	.601	.762	
	4	The school provides necessary equipment, books, and resources.	.728	.741	
	5	Students expressed their gratitude and blessings.	.791	.733	
	6	Students express concern and support when conflicts arise.	.362	.798	
	7	Parents acknowledge class management.	.364	.796	
	8	Parents affirm that the efforts put into work (which can be both direct and indirect)	.286	.805	
Classification	**Item**		**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**	**Cronbach's Alpha**
Physical Fatigue	1	I have less strength in my muscles.	.480	.818	.826
	2	The Whole body feels tired.	.551	.808	
	3	My legs feel tired/heavy.	.529	.812	
	4	My shoulder feels stiff or painful.	.541	.810	
	5	I feel stiff in my legs and arms.	.698	.799	
	6	My body movement slows down.	.593	.802	
	7	My arms/legs feel numb.	.662	.791	
	8	I feel cramps in my muscles.	.577	.803	
	9	My joints feel achy.	.332	.832	
Emotional Fatigue	1	My motivation is lower when I am fatigued.	.633	.672	.733
	2	Exercise brings me fatigue.	.537	.691	

Classification	Item		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	3	I am easily fatigued.	.295	.731	
	4	Fatigue interferes with my physical function.	.244	.736	
	5	Fatigue causes frequent problems for me.	.682	.672	
	6	My fatigue prevents sustained physical functioning.	.489	.701	
	7	Fatigue interferes with the ability to carry out certain duties and responsibilities.	.451	.701	
	8	Fatigue is among my three most disabling symptoms.	.395	.712	
	9	Fatigue interferes with my work, family life, and social activities.	.201	.757	
Mental Fatigue	1	Thinking requires effort.	.687	.904	
	2	My thoughts easily wander.	.767	.897	
	3	Lacking in energy.	.818	.890	.912
	4	Yawning	.711	.902	
	5	My eyes feel strained.	.797	.891	
	6	Hearing ability is reduced.	.707	.902	
	7	My mind feels clear (positive question).	.695	.903	

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