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Job burnout and resilience among palliative care professionals in china: a qualitative study

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Abstract

Background Medical professionals who are engaged in palliative care commonly experience negative emotions resulting from the pain and grief experienced by patients and family members, which results in enormous psychological pressure for professionals, and the risk related to job burnout is significantly greater.

Objective We aimed to explore the factors influencing job burnout and resilience among palliative care professionals.

Methods We conducted a qualitative study using semistructured interviews and purposeful sampling methods. Face-to-face interviews were carried out from September 2023-April 2024 in the palliative care ward of one of the top three hospitals in a province of China. A total of 22 palliative care professionals were interviewed. The interview data were coded and relevant topics were extracted and summarized from two perspectives: factors influencing job burnout among palliative care professionals and resilience to job burnout. Data analysis was guided by Colaizzi's seven-step method.

Results This study identified personal, work, institutional, and social factors affecting job burnout among palliative care professionals in China. Personal factors include the original intention of engaging in palliative care, psychological qualities, and ways of coping with stress. Work factors include work intensity and environment and the characteristics and nature of palliative care work. Institutional and social factors include promotion mechanisms, wages and benefits, government policy support and professional recognition, as well as cultural conflicts from traditional China. The factors that affect resilience include personal internal factors and external factors. Personal internal factors come from good self-regulation and emotional balance, while external factors come from an increasingly sophisticated social support system and effective intervention measures to cope with job burnout.

Conclusion Our research found that many factors affect the job burnout and resilience of palliative care professionals. Promoting the construction of a professional team in palliative medicine, rational allocation of human resources, improving the welfare benefits of professionals, enhancing their social status, safeguarding their legitimate rights and interests, establishing effective emotional and social support systems, and implementing effective intervention measures in cultural contexts are all effective ways to reduce work fatigue and enhance resilience. Future research needs to investigate intervention measures to address or prevent burnout.

Keywords Palliative care, Job burnout, Resilience, Qualitative research

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Background

The characteristics of burnout are emotional exhaustion, personality disintegration, and decreased personal sense of achievement [1–3]. Medical staff are a high-risk group for job burnout, which seriously affects their physical and mental health. Cardiovascular disease, musculoskeletal disorders, depression, and anxiety are all related to burnout [4]. Job burnout can also reduce the job satisfaction of medical staff, leading to an increase in absenteeism days and turnover rates [5]. Affected healthcare workers may feel exhausted and lack a sense of personal achievement. It may include negative, cynical, hostile attitudes and a sense of detachment towards patients and their relatives, known as personality disintegration, which may worsen [6].

Psychological resilience is defined as the ability to cope and adapt to adversity effectively [7]. It is a dynamically evolving process that cultivates positive attitudes and effective strategies for dealing with stress. It is associated with lower levels of burnout, increased empathy, and longevity, and is the ability to "bounce back" or recover from stress. The relationship between psychological resilience and job burnout has received a lot of attention from researchers. Psychological resilience has a positive contribution to mental health [8] and can reduce the incidence of job burnout and other conditions [9, 10].

Palliative care improves the quality of life for patients and their families facing challenges related to life-threatening diseases by preventing and reducing suffering. Palliative care professionals are considered a risk group for burnout, as they face the pain, dying, and death of patients every day [11]. Their work requires making difficult ethical decisions, which may lead to physical, psychological, or work-related stress [12]. If these stressors are not identified and managed in a timely manner, palliative care professionals may be at risk of burnout. The risk of burnout in this field is significantly higher than in other healthcare fields [10, 12–14]. In the past decade, extensive research had been conducted globally to examine the prevalence and influencing factors of job burnout among palliative care professionals [15–17]. Dunwoodie et al. [12] showed that the burnout rate among palliative care clinicians in Australia was 24%, while in the United States it was 50% [18]. A systematic review showed that the global prevalence rate was 17.3% [15], with social workers and family end-of-life care workers having the highest prevalence rates.

There is little qualitative research examining burnout and resilience in the palliative care field from the palliative care professionals' perspective. One such study by Koh et al. [19] examined the views and understanding of job burnout and resilience among doctors who had worked in palliative medicine for more than 10 years. Furthermore, to our knowledge, there has been no previous research exploring the job burnout and resilience of palliative care professionals in China. Therefore, this study aims to explore the factors that influence job burnout and resilience from the perspective of palliative care professionals in China through qualitative research methods.

Methods

Research design

This descriptive qualitative study used one-on-one semi-structured in-depth interviews to understand the factors influencing job burnout and resilience among palliative care professionals.

Institution

This study was conducted in the palliative care unit of West China Fourth Hospital of Sichuan University in China. Due to the development stage of palliative care in China, most medical institutions have not been established for a long time and are still in the stage of personnel reserve and palliative ward construction. Therefore, we chose to establish an independent palliative care ward in a large tertiary medical institution for our research (the institution established a palliative care ward in 1995). The ward currently has 48 beds and treats patients of any age who experience any painful symptoms at the end of their illness. There are 16 doctors, 25 nurses, 1 social worker, an MDT team (composed of medical staff from the rehabilitation department, traditional Chinese medicine department, mental health center, and nutrition department), and a volunteer team composed of foundations and university students. We recruited professionals in the palliative care ward because they are better able to reflect job burnout due to long-term exposure to the palliative medical work environment.

Participant

Using purposive sampling method, eligible medical staff in the ward were invited to participate via email from September 2023 to April 2024. Combined with the hospital's requirements for new medical staff (rotation and further study in other departments), the inclusion criteria were as follows: (1) had worked in the palliative medicine department for at least 5 years; (2) had good thinking and language expression abilities; (3) were willing to participate in this study. The exclusion criteria were follows: Those who suffered from major illnesses were not eligible to participate. This study was approved by the Ethics Committee of West China Fourth Hospital of Sichuan University (Ethics Code: HXSY-EC-2023066) and obtained written consent from each participant.

Qualitative approach

This study adopted a phenomenological survey method of qualitative research [20]. Through reviewing literature, combined with domestic and foreign research results on factors affecting job burnout and psychological resilience [19, 21, 22], the research team independently designed an interview outline, including the basic information of the respondents, such as job category, professional title, marital status, work experience, and whether they received professional training before entering the department; And the contents of the detailed interviews were showed in Table 1. Extract and summarize relevant topics from two aspects: factors affecting job burnout and resilience.

Table 1 Contents of the interviews

1. Do you enjoy working in the palliative care unit? How do you feel working in a palliative care unit?
2. Are you satisfied with your current job?
3. If given the opportunity, would you leave your palliative care position?
4. Can you describe your feelings after work ?
5. Have you ever experienced physical and mental exhaustion? How long has it been?
6. Do you think your work, such as working hours, workload, work intensity, work remuneration, and workflow, is reasonable?
7. Do you think your current job has an impact on your life? What kind of impact is it?
8. Do you feel pressure working in the palliative care department? Where does the pressure come from?
9. Do you think you have good opportunities for promotion in your current job? What is the reason?
10. What is your opinion on the salary and benefits of palliative care professionals?
11. Do you think hospitals and governments support palliative care policies?
12. What is your opinion on the current development of palliative care in China? Do you have any suggestions?
13. How do you get along with your colleagues and leaders?
14. How do your family and friends view your current work in palliative care?
15. How do you usually (psychologically and operationally) address some dissatisfaction or emergency situations when facing terminally ill patients? Is it effective?
16. What kind of help do you most want when you encounter difficulties in palliative care work?
17. What do you think are the main factors causing job burnout among palliative care professionals?
18. What measures do you think can be taken to improve job burnout among palliative care professionals?
19. How do you relieve work pressure and fatigue in daily life? Is it effective?
20. What suggestions and expectations do you have for palliative care work?
21. Do you have anything else to share about fatigue and resilience in palliative care?

Data collection

Two researchers (LH and YC) received training before conducting the interviews. All interviews were conducted in a conference room located in the palliative care ward of West China Fourth Hospital of Sichuan University in China, ensuring privacy and comfort. The interview was conducted at a convenient time for the participants. Two researchers explained the purpose, significance, and methods of the study in detail to the respondents. Participants underwent semi-structured in-depth one-on-one face-to-face interviews, with each interview lasting 60 to 90 min During the interview process, investigators always maintained a respectful tone and approach, avoided suggestive language to ensure that the interviewee felt, experienced, and collected information truthfully and reliably. Using digital recording, anonymization, and verbatim transcription. Within 24 h after the interview, the recording was transcribed into text. After this, two members of the research team checked the accuracy to avoid adding personal views and ideas of the interviewees, and the non-verbal information during the interview was supplemented by reference to the recorded notes. If there were ambiguities or doubts, the interviewees were returned for verification. When data saturation was reached, i.e., when participant information was duplicated and no new topics emerge, the interview stopped [23, 24].

Sample size

The sample size was determined on the basis of the principle [25] that data collection continues until no new content emerges and saturation is reached. In this study, after 22 subjects were interviewed, no new information was obtained, indicating that data saturation had been achieved. Thus, the sample size for this qualitative research was 22. The subjects were designated P1, P2…, P22.

Data analysis

The research team members (The researchers QD and SC) carried out the data analysis, coding, and topic extraction. Data analysis follows Colaizzi's 7-step analysis method [26]: (1) Carefully read the raw data. (2) Choose sentences of significant importance. (3) Encode meaningful viewpoints that repeatedly appear. (4) Summarize coding perspectives. (5) Write a detailed description. (6) Identify similar viewpoints and extract thematic concepts. (7) Return the written text to the interviewee for verification and confirmation.

Data analysis involves two researchers independently analyzing both linguistic and nonverbal information.

During the analysis process, the data was compared with the original data. When researchers had different opinions, the research team was asked to analyze and discuss until consensus was reached At the same time, by writing memos and reflective notes and dynamically adjusting interview strategies, the authenticity and accuracy of materials could be improved. This study followed the Comprehensive Criteria for Qualitative Research Reports (COREQ) checklist [27].

Prior to the interview, the researchers informed the participants of their voluntary nature of participation. All interviews would be recorded in electronic form, and all collected information would be kept confidential. All participants were informed that they could withdraw from the study or refuse to answer any questions during the data collection process at any time. During the interview process, researchers should pay special attention to participants' negative emotions and provide appropriate methods of empathy and understanding to avoid the physical and mental harm caused by the long-term existence of negative emotions.

Results

Participant characteristics

A total of 22 palliative care professionals (11 doctors, 10 nurses, and 1 social worker) were interviewed over a period of seven months. Participants ranged from 27 to 57 years old (mean age of 39.3 years), and they had worked in palliative care fields for an average of 12.1 years (range: 5 years to 24 years). The social demographic data about participants were shown in Table 2,

Table 2 The social demographic data

Characteristic	n (%)
Total	22
Doctors	11 (50)
Nurses	10 (45.5)
Social workers	1 (0.5)
Age	
Rang (yrs)	27–57
Mean ± SD	39.3 ± 7.4
Gender	
Male	3 (13.6)
female	19 (86.4)
Years of work in palliative care	
Rang (yrs)	5–24
Mean ± SD	12.1 ± 5.8
Positional titles	
Primary	4 (18.2
Intermediate	13 (59.1)
Expert	5 (22.7)

Table 3 Factors affecting job burnout among palliative care professionals

Category	Subcategory
Personal Factors	(1) Original intention to work in palliative care
	(2) Personal traits and psychological qualities
Work factors	(1) Work intensity and environment
	(2) Characteristics and nature of work in palliative care
Institutional and social factors	(1) Promotion mechanism
	(2) Salary and benefits
	(3) Policy support and professional recognition
	(4) Chinese traditional culture clash

Table 4 Factors affecting job burnout resilience among palliative care professionals

Category	Subcategory
Personal internal factors	Self regulation and balance
External factors	(1) Changes in the Social Support System
	(2) Effective interventions for job burnout

and relevant topics were extracted and summarized from two perspectives: factors influencing job burnout among palliative care practitioners (Table 3) and resilience to job burnout (Table 4).

Factors affecting the job burnout of medical professionals in palliative care

Theme 1: personal factors

(1) Original intention to work in palliative care

Many of the palliative care professionals did not enter the field out of personal choice. Instead, most were introduced to palliative care because of work requirements or hospital assignments.

"The reason for becoming a palliative care practitioner is that China's population is aging, the country is vigorously promoting hospice care, other departments have been saturated, and I cannot find a better professional. However, from the heart, I am not very willing to work in the palliative medicine ward." (P17).

Six respondents reported that they did not take the professional voluntarily. They frequently experienced a strong desire to quit and high levels of job burnout, which impacted the stability of the palliative medicine team.

"I am a doctor. When faced with death and sadness every day, I feel that I cannot find a sense of personal accomplishment here. I want to give up this professional, but I hesitate." (P8).

(2) Personal traits and psychological qualities

Medical professionals who were not good at expressing themselves or socializing usually had low levels of psychological tolerance and tended to struggle with self-adjustment in the face of difficulties, and they were more susceptible to job burnout. Conversely, medical professionals who enjoyed chatting and confiding with friends more effectively managed their negative emotions.

"Working in the palliative medicine department, I feel that I must have a strong heart and strong mental endurance, because in the face of death every day, in the face of crying family members, in the face of patients' pain cannot be solved, and more importantly, to empathize with patients and family members, if you cannot do it, it will be difficult to understand the joys and sorrows of the human world." (P9).

"I don't want to hide my bad mood in my heart. I like to confide in my family and friends about anything that happens at work, and I think it is very helpful for dealing with stress and negative emotions." (P13).

"I am introverted and do not like to socialize. I go home to rest after work every day. I cannot get rid of my bad emotions in the ward, and I am easily affected by the sad emotions of patients' families." (P6).

Theme 2: Work factors

(1) Work intensity and environment

Most participants indicated that the workload and working hours in the palliative care ward were considerably greater than those in other departments. The care required for one patient in the palliative care ward is equivalent to that needed for 2–3 patients in other departments. Many reported difficulty in leaving work on time and frequently working overtime. Nightshift professionals, in particular, handle patients' pain, restlessness, and breathing difficulties, resulting in significant fatigue.

"Previously, during rotations in the oncology department, nights could often be restful. However, in the palliative ward, nights are spent continuously managing patients' pain, breathing difficulties, hematemesis, and even patient deaths. Despite limited treatment options, patients and their families frequently call for doctors and nurses at any time, leading to constant demands on staff. "(P22).

(2) Characteristics and nature of work in palliative care

Because palliative care units are filled with patients at the end of their lives, medical staff have to deal with distressed patients, frustrated families, and the possibility of death at any time. These can be stressful for palliative care professionals, and if these stresses are not managed in time, the risk of job burnout may increase.

"When I see the crying family members, my tears are also swirling in my eyes. I think I have cried more than thousands of times in the palliative care unit." (P2).

"Especially in the case of sick children, we share the grief of the parents of the children, regretting that they are sick at a young age, and even use our personal feelings to try to help them, although the help is less and more comfort." (P1).

Theme 3: Institutional and social factors

(1) Promotion mechanism

As palliative care integrates nursing and medical treatment, professionals must dedicate substantial time to patients and their families. Some patients, who are in the terminal stage, are unable to participate in medical research. Compared with other specialties, professionals in this field seldom produce high scores or high-quality research articles, which adversely affects opportunities for professional advancement. Consequently, a lack of motivation and a decreased sense of future prospects are observed, leading to increased burnout, professional resignation, or attempts to transition to other departments.

"Every day, I need to spend a lot of time communicating with patients and their families, and I also use my off-hours to finish writing medical records. I have no time to do scientific research" (P14).

"Compared with doctors in other departments, I

think professionals in palliative care spend too much time on patients and their families. We need to communicate with patients and understand the psychological status of patients and their families and we have no time or energy to perform basic research and scientific research projects." (P15).

"What I have done most is retrospective research. The level of cooperation between prospective research families and patients is not high. As patients' condition worsens, trials are often forced to be interrupted, resulting in failure to publish high-quality articles or apply for scientific research projects, which has a great impact on professional title promotion." (P5).

(2) Salary and benefits

In the interviews, nearly all medical workers highlighted concerns regarding their salaries, which they hoped would be addressed by relevant departments or hospitals. They observed that hospitals currently operate on a self-financing basis, meaning that salaries are proportional to income. However, palliative care does not generate revenue, as it primarily addresses terminally ill patients. The integration of care and medical treatment requires significant time and effort from medical professionals, who also face psychological stress. Additionally, many projects in palliative care, particularly those related to care, cannot be billed due to the field's developmental stage. Consequently, professionals in palliative medicine often perform extensive work with minimal compensation, which negatively affects professional satisfaction and contributes to job burnout.

"We do a lot more work than other departments do, but we are paid the least in the whole hospital." (P13).

"I think the hospital should raise the salary of the palliative care professionals or give them appropriate compensation. Our efforts are grossly disproportionate to our income; otherwise, it would be unfair to us. " (P10).

(3) Policy support and professional recognition

In the interviews, the participants noted that, as palliative care is still developing in China, government policy support is inadequate. The absence of a comprehensive palliative medicine insurance policy system has led to increased pressure and job burnout among medical professionals due to various constraints encountered while treating patients.

"In addition to treating patients, we also have to explain the medical insurance policy to patients and their families. They believe that they can stay in the palliative care unit all the time and leave the hospital whenever they want, which is not allowed by medical insurance. This is very stressful for us." (P8).

"Many of the treatments we already do are not chargeable, such as palliative sedation technique, aromatherapy, family meetings, etc., which take up a lot of our time and energy, and the cost of health care personnel is not reflected in any way. "(P11).

Some patients and their families do not acknowledge the significant pressure and physical and mental fatigue experienced by healthcare workers. This lack of recognition can decrease work enthusiasm and a sense of achievement, potentially leading to job burnout.

"Although most family members are very grateful to us, some family members and patients still have numerous complaints that we did not address their concerns in a timely manner and did not fully manage the patients' symptoms. "(P3).

"I recall an incident that occurred in the ward some time ago: a child passed away peacefully at night while the family members were asleep. The nurse discovered this and informed the family during the night rounds. However, the family members were unable to accept that they had missed the child's final moments and transferred their grief to the professionals. They expressed strong dissatisfaction with us, believing that our night rounds were not timely enough and that we failed to detect the child's condition earlier, which caused significant distress to our professionals. "(P6).

(4) Chinese traditional culture clash

Some participants indicated that owing to traditional Chinese culture, many patients remain unaware of their illness at the time of death. The cultural norm of "reporting good news rather than bad news" has resulted in resistance among professionals to perform diagnostic and therapeutic activities, preventing them from conveying "bad news" to patients. In medical decision-making, family members often act as the primary decision-makers rather than the

patients themselves, which means that decisions made before patients' deaths may not fully reflect their preferences.

"I want to tell the patient the real condition, but the family members block me, because they think that the patient may get worse or even worse after telling the patient the condition, and the patient has been waiting for the condition to get better, but it is impossible, which brings us a lot of pressure." (P9).

Job burnout resilience among palliative care professionals

Theme 1: Personal internal factors

Self regulation and balance

Despite the challenging nature of their work, participants reported that adequate relaxation during their leisure time could assist in stress relief and self-regulation, enabling them to approach patients and their families with a fully refreshed mental state. Through mindfulness and reflective practice, palliative care professionals could adapt to negative emotions in the palliative care ward environment, change themselves, adapt to the environment, restore psychological resilience, and achieve emotional and psychological balance.

"After I left the hospital, I tried not to think about the upsetting things that happened in the hospital, and I did something I liked to relax myself." (P12).

"When I rest, I like to listen to music or do yoga to relax myself. Every time I finish my rest, my mood returns to calm and I can go back to the ward to continue working." (P21).

"After returning home, don't think about what happened in the hospital, don't put too much pressure on yourself, learn to love yourself, this is very important. Reducing expectations of oneself and accepting mistakes is okay, don't push yourself too hard."(P16).

Theme 2: External factors

(1) Changes in the Social Support System

The majority of medical professionals indicated that support and recognition from family and friends served as motivation to persist in palliative medicine. Family members play a crucial role in motivating them and mitigating the effects of negative emotions. Reports from colleagues can assist palliative medicine professionals in problem solving, reducing stress, and increasing work enthusiasm.

"It is important to have the support of family and friends. Their recognition of work provides motivation to remain in the palliative unit and is believed to help reduce the level of job burnout. (P8).

"My friends and family understand me, support me and trust me. They view working in the palliative medicine department as a commendable and meaningful endeavor, as it involves alleviating patient suffering and ensuring peaceful death. Emphasis should be placed not only on the length of life but also on its quality" (P10).

"We have a good relationship with colleagues. We like each other very much. It makes me happy to work with them. Challenges at work are addressed collaboratively, with some colleagues making considerable efforts to resolve issues". (P1).

Most studies have indicated that, owing to China's aging population and high incidence of tumors, the demand for palliative medicine is very high. The promising career prospects in palliative medicine also serve as motivation for them to continue working in the palliative medicine ward.

"Although there are many challenges at present, we remain optimistic about the future of palliative medicine. We believe that our government and relevant departments will gradually implement policies to increase the overall quality of palliative care services for professionals, patients, and their families." (P9).

Some subjects noted that family recognition positively impacts healthcare professionals, enhancing their professional identity and substantially reducing job burnout.

Most families express deep gratitude, often reaching out long after the patient has passed away to thank them the efforts made. This recognition has contributed to reducing burnout to some extent. (P5).

Our department receives the most banners, which represent the families' gratitude and recognition of our work. This appreciation helps alleviate the grievances experienced by individual families. (P13).

(2) Effective interventions for job burnout

The palliative care ward is equipped with psychological counselors, and psychological consultation rooms have been established. Regular psychological symposiums are conducted. Psychological counselors provide support to patients and families, as

well as medical professionals. When psychological issues arise, assistance from psychological counselors is typically highly effective.

"I always consult with our counselors when I feel panicked. Speaking with them helps me feel calmer and more optimistic." (P7).

"The department has a psychological consultation room that serves not only patients and their families but also our staff. We regularly organize psychological forums where everyone shares their thoughts, and the psychologist guides us through some psychological games, which are very effective in relieving stress and releasing negative emotions. "(P19).

In the palliative care ward, a "medical voice book" had been established to enable medical professionals to document their concerns in writing and address these issues promptly, ensuring that professionals feel supported, needed, and valued.

"I will write my dissatisfaction or something unsatisfactory in the medical voice book, and these problems will be solved soon, which makes me feel that I am valued in this group." (P16).

Discussion

Our study was currently one of the few qualitative research methods to discuss the influencing factors of job burnout and resilience among palliative care professionals.

1) Promote the construction of the palliative care professional team and allocate human resources reasonably

This study found that due to the development stage of palliative care in China, most professionals were from other medical disciplines or were forcibly assigned to the department by medical institution managers, rather than out of personal preference. Palliative care professionals who did not choose palliative care based on personal preferences were more likely to experience job burnout, which might be due to a lack of enthusiasm for their work, consistent with the findings of Laschinger et al. [28]. Other studies [16, 29] suggested that job burnout was associated with inadequate training and education in palliative care, which was consistent with this study. Professionals with professional backgrounds, training, and a certain level of knowledge have less work pressure. Therefore, it is necessary to strengthen the construction of a professional team of palliative care and create a group of professionals who have undergone professional training, as well as selected professionals who love and are willing to engage in palliative care and related work.

This study found that palliative care professionals have much higher work intensity and pressure compared to other medical professionals. High-intensity and high-pressure work lead to significant job burnout among palliative medical staff, which was consistent with the results of other Chinese scholars. Diehl et al. [30] reported that over 20% of palliative care work hours were associated with an increase in job burnout. In addition, a systematic review by Rizo Baeza et al. [31] identified workload as an important risk factor for burnout among palliative care nurses and pointed out that nurses who work more than 8 h a day face a greater risk of burnout. Khan et al. [32] reported that among palliative care physicians, job burnout was often a syndrome related to workload. Therefore, managers need to allocate human resources reasonably, reduce the workload of palliative care professionals by increasing professional staff, optimize working hours, and thus reduce work intensity.

2) Improve the welfare benefits of professionals, enhance social status, and safeguard legitimate rights and interests

The factors that directly determine an employee's "effort" were the value of the compensation received by the employee and the probability of obtaining equivalent compensation through effort [33]. Our research found that due to the characteristics of palliative medical services, palliative care professionals needed to invest a lot of time in providing psychological counseling, comfort care, and humanistic care to patients and their families. However, these medical services had not been included in medical insurance, resulting in a mismatch between their income and expenses. Liu Jing et al. [34] identified annual income as a risk factor for severe emotional distress among nurses in multiple tertiary hospitals in Shanghai. Zhu Hua et al. [35] reported that insufficient material satisfaction was a risk factor for severe emotional exhaustion among ordinary professionals at the grassroots level in Shenyang, indicating the need to increase income. Jin Lingling et al. [36] reported that higher monthly income was associated with a decrease in job burnout among anesthesiologists. Lack of government policy support, especially the absence of a comprehensive palliative care insurance system, has led to greater pressure and job burnout for medical professionals when treating patients due to various restrictions. Ghazwani's research [37]

showed that the overall prevalence of physician burnout in palliative care in Saudi Arabia was relatively low, which was significantly related to the availability of hospital services such as administrative support, supportive healthcare personnel, and painkillers. This observation was consistent with several Chinese studies [38, 39] that emphasize many difficulties and challenges faced by palliative care in China.

Therefore, managers should strive for a higher salary ratio for palliative care professionals in terms of night shift fees, allowances, and other welfare benefits. They should include palliative care specialty service projects in national medical insurance and reflect the work value of palliative care professionals by adjusting their economic income. Treating palliative medicine on an equal footing with other medical professions and even appropriately tilting policies towards frontline clinical personnel will help reduce job burnout, enhance professional happiness and identity, and thus increase their resilience.

3) Establish an effective emotional and social support system

Reports had shown that frequent exposure to patients' pain, loss, and sadness was associated with emotional burdens and was an important source of stress for nurses [40, 41]. The ability to recover from stress through self-regulation was called psychological resilience [42], and previous research [43] had confirmed a significant correlation between individual resilience and career satisfaction. Our research found that palliative care professionals with high psychological resilience could better adapt to adversity and maintain physical and mental health by adopting positive attitudes such as self reflection, mindfulness practice, seeking support from family and friends, etc. Introverted professionals with lower psychological resilience were more likely to experience job burnout when faced with challenges, which might be related to their personality traits and difficulties in managing negative emotions. The resilience building strategies adopted by participants, such as seeking support from colleagues, practicing mindfulness, and engaging in reflective exercises, are consistent with effective coping mechanisms identified in the literature [44]. Seeking social support from colleagues has been considered a key strategy for healthcare professionals to manage emotional distress and cultivate resilience. It has been reported that a supportive work environment can cultivate a sense of camaraderie, open communication, and a shared understanding of the emotional challenges inherent in palliative and end-of-life care [45]. Delgado et al. [46] reported that providing counseling services to nurses can provide them with a safe space to handle their emotions and seek professional guidance, while resilience training can equip them with practical strategies and skills for managing stress and promoting emotional health.

Therefore, medical institutions can utilize these features to develop comprehensive social support systems and resources to meet the emotional needs and social support of palliative care professionals [47]. This may include implementing flexible training programs, providing consulting services, cultivating a supportive organizational culture, and establishing guidance opportunities for palliative medicine professionals at different career stages [48]. By providing necessary skills and knowledge to palliative healthcare professionals early in their careers, they can better prepare for the emotional challenges they may encounter in palliative care and end-of-life care environments [49].

4) Effective intervention measures in cultural context

When exploring the factors that influence work burnout and resilience among palliative care professionals, we must consider China's cultural background and traditional views on life and death. Our research found that the cultural custom of "reporting good news but not bad news" made it difficult for some terminally ill patients to have a clear understanding of their illness before death, which brought certain pressure on palliative care professionals and made them more prone to work fatigue when facing these patients and their families. Therefore, it is necessary to consider the impact of local religious customs and social norms on patients and their families. Understanding these cultural differences is crucial for developing effective resilience-building plans and taking effective intervention measures to address this special culture, such as conducting comprehensive life and death education, promoting advance directives, and making decisions on my own death. All of these measures will to some extent alleviate the work fatigue of palliative medicine professionals and help their resilience.

In addition, effective intervention measures play a crucial role in alleviating job burnout among palliative care healthcare professionals [50–52], as well as their recovery. Our research found that by implementing effective intervention measures, such as establishing employee counseling groups and counseling rooms, negative emotions of employees could be addressed, and psychological counseling and stress reduction forums could be conducted without disturbing employee rest, as well

as improving self psychological regulation ability. By providing psychological counseling and establishing platforms such as "professionals speak up", negative emotions could be resolved and released in a timely manner, thereby enhancing personal happiness, enriching cultural life, and improving self-efficacy.

Limitations

The results and limitations of this study have also identified some potential research directions for the future. As is well known, the palliative care team is a multidisciplinary team that includes psychological counselors, social workers, nutritionists, volunteers, physical therapists, and so on. Our limitation lies in not including different members of the multidisciplinary palliative care team, only including doctors, nurses, and social workers. Besides, we did not investigate different palliative medicine service models(inpatient palliative care and home palliative care). In addition, this study only investigated professionals from one medical institution and did not conduct a multicenter study, which may result in a lack of applicability and limitations in its promotion. In the future, we can conduct a multi-center and multi-team study to analyze the similarities, differences, and causes of job burnout in different medical institutions.

Conclusion

The research results of this article indicate that palliative care professionals face enormous pressure and a high risk of job burnout during their long-term work due to personal factors, work factors, and institutional and social external factors. Their resilience comes from good internal self-regulation and a gradually improving support system in the external society. Promoting the construction of the palliative care professional team, rational allocation of human resources, improving the welfare benefits of professionals, enhancing their social status, safeguarding their legitimate rights and interests, establishing effective emotional and social support systems, and implementing effective intervention measures in cultural contexts are all effective ways to reduce work fatigue and promote their resilience. In the future, research can be conducted on how to address or prevent job burnout, and intervention measures can be taken to effectively reduce the occurrence of job burnout, in order to improve the work flexibility of professionals and solve the problem of burnout.

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Authors' contributions
Made a substantial contribution to the concept or design of the work: FT, NL,CZ，QD，YW and SC. Data collection and data analysis were done by: LH and YC. FT and YW drafted the manuscript. All authors revised the manuscript critically for important intellectual content. All authors approved the final manuscript to be published and have participated sufficiently in the work to take public responsibility for the content.

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Data availability
Data is provided within the manuscript or supplementary information files.

Declarations

Ethics approval and consent to participate
The study was conducted in compliance with The Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. The protocol was approved by the following ethical committees: The study received approval from the Ethics Committee of the Fourth Hospital of West China, Sichuan University (Ethics number: HXSY-EC-2023066). All methods were carried out in accordance with relevant guidelines and regulations. Informed consent was obtained from all participants.

Consent for publication
Participants provided informed consent for publication of the quotes.

Competing interests
The authors declare no competing interests.

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