

**RESILIENCE OF THAI MEDICAL PROFESSIONALS DURING
THE COVID-19 PANDEMIC**

The image shows a large, faint watermark of the Mahidol University logo in the center of the page. The logo is circular and features a central emblem with Thai script around the perimeter. The name 'YUSUKE KUROIWA' is printed in bold black text across the middle of the watermark.

YUSUKE KUROIWA

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I sincerely pledge to apply the valuable lessons learned here to make meaningful contributions to society.

Yusuke Kuroiwa

RESILIENCE OF THAI MEDICAL PROFESSIONALS DURING THE COVID-19 PANDEMIC

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ABSTRACT

This study investigated the resilience factors and coping strategies of Thai medical professionals, including doctors, nurses, and pharmacists, during the COVID-19 pandemic. Confronted with unprecedented challenges, these professionals had to manage stress and adapt in ways crucial for future crisis preparedness and resilience enhancement.

Given the multifaceted nature of resilience, capturing nuanced experiences was essential. To achieve this, qualitative research methods were employed, involving in-depth interviews with 8 healthcare professionals from both public and private sectors in urban areas, aged between 26 and 41, with diverse family structures.

The findings identified their primary challenges during the pandemic and categorised resilience factors into external and internal dimensions. Based on the analysis, the study proposed recommendations to enhance resilience in facing not only pandemics but also broader crises.

Subsequent chapters detail the study's motivation and objectives, provide a background through a literature review, describe the research methods, present the findings, and outline recommendations for enhancing resilience.

KEY WORDS: RESILIENCE/MEDICAL PROFESSIONALS/ COVID-19

39 pages

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CHAPTER I

INTRODUCTION

Resilience is a hot trend nowadays. At the 2022 Davos meeting, the World Economic Forum brought together public and private sector leaders to launch the Resilience Consortium, which aims to build resilience globally across regions, economies and industries (Brende & Sternfels, 2022). Resilience is required across businesses, economies, and society at large. This trend is expected to continue, and both organisations and individuals require resilience for sustainable growth. Technology and AI will become more advanced, and while specific hard skills will still be required, sustainable resilience will be demanded more by the market. That is the main reason why I chose this theme for my thematic paper.

As we know, we cannot avoid difficult situations in our life. Since 11th March 2020 that WHO (World Health Organization) declared the pandemic, there were exposed to various difficulties, both external and internal factors (World Health Organization, 2024). The nature of infectious diseases required social distance from people, and face-to-face communication was significantly reduced.

In the real world, there are many factors that we cannot control. The COVID-19 pandemic was one of these factors, involving a multitude of external elements. Regarding stress management, it is crucial to classify factors that we can control or not. During the pandemic, there were a lot of challenges and uncertainty difficulties in their workload and their private life as well. In an ever-changing pandemic, acquiring new information and continuing to learn constantly was vital. Furthermore, the pandemic lasted longer than expected in the first place, resulting in a test of perseverance and resilience.

As shown above, healthcare workers faced a variety of difficulties during the pandemic and were exposed to many external factors which were beyond their control. Among other things, the situation where treatment had to be required by citizens and the government even though there was a lack of medical equipment and therapeutic

medications without sufficient scientific evidence, which brought very stressful for healthcare professionals. Many healthcare workers may also have been concerned about working in a hospital with a high risk of infection, which means that they could transmit the virus to family members. This means that they may have had more stress in their personal lives than others. Furthermore, the pandemic lasted longer than expected, and understanding how they had fought and managed the stress with no end in sight can be useful for facing future challenges.

This paper explores specific resilience factors during the pandemic among Thai medical professionals in hospitals and clinics. After that, solutions to encourage medical providers to overcome future difficulties are recommended.

The objectives of this study are described in the Research Questions following:

- Research Question 1: What were the main challenges during the COVID-19 pandemic for Thai medical professionals?
- Research Question 2: What were effective solutions to deal with your stress during the pandemic for Thai medical professionals?
- Research Question 3: Which personal factor most affected resilience among Thailand's medical professionals?

To achieve these objectives, qualitative research is selected. Interviews with medical professionals give insight relevant to resilience and give clues on the answer to the research topics above.

CHAPTER II

LITERATURE REVIEW

In the literature review part, there are 2 main frameworks for general resilience. Each method differs in whether it focuses on external or internal factors. Resilience is complex with both factors. Therefore, understanding and combining both theories are crucial to grasping the concept of comprehensive resilience.

Resilience is one of the most critical aspects of our life and work. Dean Becker, the president and CEO of Adaptiv Learning Systems, described resilience as “More than education, more than experience, more than training, a person’s level of resilience will determine who succeeds and who fails. That’s true in the cancer ward, it’s true in the Olympics, and it’s true in the boardroom” (Coutu, 2002). Hard skills are necessary, especially in fields of expertise such as the medical industry. Yet, full performance cannot be achieved without resilience abilities, as medical professionals are generally under high pressure since their work directly affects patients' lives (Case Western Reserve University, 2022).

This section delves into general resilience and the main existing theories about resilience through literary analysis. Following that, it specifies factors observed during the pandemic, and then identifies challenges and strategies in the medical area.

2.1 Definition of Resilience

“Resilience was defined by most as the ability to recover from setbacks, adapt well to change, and keep going in the face of adversity” (Ovans, 2015). How individuals perceive difficulties and respond accordingly plays an important role in developing resilience. According to Luthar, Cicchetti, & Becker (2000), resilience refers to an individual's ability to recover from difficult situations and grow from those experiences, which is closely related to cognitive appraisal. This psychological mechanism

entails an individual's interpretation of experiences, shaping their response to stress and adversity (Litwic-Kaminska, 2020).

Resilience can be measured by various methods such as the Brief Resilient Coping Scale (BRCS), the Adult Resilience Measure (ARM-R), descriptive/analytical cross-sectional studies, and interviews.

The Brief Resilient Coping Scale (BRCS) is a psychological assessment tool designed to measure an individual's tendency to cope with stress in adaptive and flexible ways (López-Pina et al., 2016). It emphasises the capacity to employ effective coping strategies actively to solve problems in stressful situations. This measure consists of 4 items between “Does not describe me at all” and “Describes me very well”, which was created to assess the propensity for highly adaptive coping with stress.

Another way of measuring the Adult Resilience Measure (ARM-R) is a psychological assessment tool designed to assess adult resilience, mental resilience, and adaptability to situations of adversity and stress (Liebenberg & Moore, 2018, as cited in Clark & Jefferies, 2023). The scale aims to measure resilience and adaptability to the range of challenges and difficulties experienced by individuals. ARM-R uses a multiple-item, self-report survey that asks participants to rate their feelings, behaviours and thought patterns. These items relate to an individual's reactions and coping mechanisms when faced with stress and adversity (Clark & Jefferies, 2023).

Resilience is not just a personal trait but a dynamic process that can be developed and strengthened over time through appropriate strategies and support (Chmitorz et al., 2018). By combining several of these assessment methods and qualitative interviews, more individual resilience can be analysed.

In the following section, general resilience and resilience in the pandemic are explored by looking for existing research and academic papers. In addition, resilience is analysed especially in terms of age, gender, profession, education background and marital status aspects. This is because several studies have indicated that these factors significantly impact the resilience of healthcare professionals (Jafari, Heidari, Sadeghi, & Heidari-Jamebozorgi, 2023). This comprehensive approach helps understand how different groups cope with stress and adversity, highlighting the importance of resilience in navigating the challenges posed by the pandemic.

2.2 Two main theories about resilience

There are 2 main theories to understand resilience: the Ecological Systems Theory and the Positive Psychology Framework. These theories show that resilience is not a single element, but a complex phenomenon formed by the interaction of diverse factors.

2.2.1 Ecological Systems Theory

Urie Bronfenbrenner proposed the Ecological Systems Theory. This theory comprises 5 factors: Microsystem, Mesosystem, Exosystem, Macrosystem, and Chronosystem (Kennedy, n.d.). Each of the 5 systems is characterised by their focus on external factors, although they differ in scope, such as the family or society as a whole. External factors include family, friends, colleagues, organisational culture, and work-life balance policies. These external factors, such as changes in workplace dynamics, support networks, and societal norms, played a crucial role in influencing individuals' resilience, demonstrating the complex interplay between personal resilience and the surrounding ecological systems.

2.2.1.1 Microsystem: This system means the closest and direct environments, which are family and workplace. These people and places are the closest interaction with a person directly, which is bidirectional. Within this system, experiences are shaped by direct communication with individuals. Since it is the closest layer of the environment, an individual is directly involved and interacts, and has the most direct impact on its development.

2.2.1.2 Mesosystem: This is related to Microsystem, which means a layer of multiple Microsystems involving individuals interacting with each other. For instance, this system includes family-school interactions and school-community relationships. In this layer, multiple environments work together to influence an individual's development.

2.2.1.3 Exosystem: This one includes broad environmental and community factors such as neighbours, colleagues, social security, mass media, politics, and policy. Various elements can shape individuals' experiences and opportunities in this layer. These groups are not directly involved but influence their lives and development indirectly.

2.2.1.4 **Macrosystem:** This is the layer that shapes an individual's cultural and social background and values. This concept gets involved at the most enormous societal level. It includes culture, social institutions, and political values. In other words, the social and cultural framework influences individual development and behaviour.

2.2.1.5 **Chronosystem:** This concept pertains to the variety of experiences individuals encounter throughout their lives. It encompasses significant life transitions, such as relocating from one area to another and more common occurrences like marriage, divorce, and the arrival of a new baby. This layer is essential in understanding environmental changes and transitions in individual development, interacting with other ecological systems to shape individual development.

The Ecological Systems Theory is valuable in resilience studies as it provides a comprehensive framework, highlighting the intricate interplay between various external factors at different levels. This theory explains how family, community, societal norms, and cultural background collectively shape an individual's capacity to withstand and overcome adversity.

2.2.2 Positive Psychology Framework

The Positive Psychology Framework was proposed by psychologists such as Martin Seligman and Mihaly Csikszentmihalyi. This theory differs because it emphasises individual strength and character, whereas the Ecological Systems Theory focuses on external factors. “Some character strengths can also be significant predictors of resilience, with particular correlations between resilience and emotional, intellectual, and restraint-related strengths” (Martínez-Martí & Ruch, 2017, as cited in Moore, 2019). Seligman and Peterson identified 6 virtues and 24 strengths as positive psychological individual elements in their book, *Character Strengths and Virtues: A Handbook and Classification* (Peterson & Seligman, 2004). 6 virtues indicate wisdom and knowledge, humanity, justice, courage, temperance, and transcendence.

Wisdom and knowledge contain creativity, curiosity, open-mindedness, love of learning, and perspective as strengths, explained as “cognitive strengths that entail the acquisition and use of knowledge” (Peterson & Seligman, 2004). This pertains to mental abilities associated with obtaining and applying knowledge. This virtue is

considered essential in personal growth and development, whereby individuals seek knowledge, learn and practise it to build a richer and more meaningful life. Medical providers need specific expertise, knowledge, and eternal learning (RCSI & UCD Malaysia Campus, 2023).

Humanity comprises 3 strengths: love, kindness, and social intelligence, which are “interpersonal strengths that involve tending and befriending others” (Peterson & Seligman, 2004). These strengths are seen as a force for building and deepening relationships with others. Humanity's behaviour and empathy for others help to build richer relationships. Healthcare professionals are expected to be committed to the health and well-being of their patients with humanity and empathy (Decety & Fotopoulou, 2015).

Justice has 3 strengths, namely teamwork, fairness, and leadership, illustrated as “civic strengths that underlie healthy community life” (Peterson & Seligman, 2004). It means the ability of individuals to respect fairness and equality with others and to fulfil their social obligations. For example, fairness as a component of justice is an ethical requirement for healthcare professionals to allocate limited healthcare resources appropriately (AMA Council on Ethical and Judicial Affairs, 2011).

Courage has 4 strengths: bravery, perseverance, integrity, and enthusiasm. It is described as “emotional strengths that involve the exercise of will to accomplish goals in the face of opposition, external or internal” (Peterson & Seligman, 2004). According to NHS England (2015), “Courage enables us to do the right thing for the people we care for, to speak up when we have concerns. It means we have the personal strength and vision to innovate and to embrace new ways of working.”

Temperance consists of forgiveness, humility, prudence, and self-control, which are “strengths that protect against excess” (Peterson & Seligman, 2004). It suggests that the control of excesses refers to the capacity for self-control. It is also important in social interactions and is an act that shows consideration for others.

Transcendence embraces appreciation of beauty and excellence, purpose, gratitude, optimism, and humour. Peterson & Seligman (2004) state that these are “strengths that forge connections to the larger universe and provide meaning.” Transcendence is vital in nurses' mental and physical health and links to an inverse relationship with burnout, particularly among cancer care nurses. It also increases mental health and positive attitudes towards work (Haugan, G., & Eriksson, M. (Eds.), 2021).

2.3 Resilience Factors in Healthcare Professionals during the pandemic

Resilience is affected by several factors, as mentioned above. There is an interesting Iranian study that comprehensively investigated resilience during a pandemic. This study identifies factors that influence the resilience of hospital medical staff during the COVID-19 pandemic. According to this research, medical staff resilience in the pandemic is classified into 6 factors, Personal factors, Family-related factors, Community-related factors, Virus-related factors, Organisational factors, and Economic factors, to investigate in more detail (Jafari et al., 2023).

2.3.1 Personal factors

Personal factors refer to their personal religious, beliefs, values, responsibility, degree of nervousness for infection, passion and so forth. Religion is one of the most essential aspects of analysing personal factors. There is interesting research on religion and resilience. According to the research in Iran, some interviewees mentioned that God and the Prophet helped not to leave them alone (Jafari et al., 2023). It also mentioned that religious well-being significantly influences family resilience in family spirituality (Prasetyo et al., 2023).

Interestingly, there is a positive correlation between education and resilience. In other words, high education attainment leads to improved coping skills. The development of social skills might be better at separating accurate from inaccurate information and leading to increased psychological resilience (Janitra, Jen, Chu, Chen, Pien, Liu, Lai, Banda, Lee, Lin, Chang, & Chou, 2023).

2.3.2 Family-related factors

Due to COVID-19 being a droplet transmission disease, families with elderly people or young children had to be especially careful. To mitigate the risk of transmitting the virus, some medical professionals lived separately from their families to prevent the transmission of the virus (Jafari et al., 2023). It depended on each family's situation and optimism about the infection risk.

Additionally, some research shows that medical practitioners with children have lower resilience than those without (Hatefipour et al., 2022). However, this requires careful consideration to be applied in general terms, as the effects are limited to specific

groups. Married health professionals were associated with access to more outstanding social support, which some suggest enhanced their resilience (De Silva et al., 2005, as cited in Harandi et al., 2017).

Another research shows that parenthood was significantly associated with higher levels of resilience, pointing to the crucial contribution of a healthy work-family balance to the healthcare providers' psychological well-being during this pandemic (Douillet, Caillaud, Riou et al., 2021). Each Family situation is complicated, so there are a lot of factors whether parenthood brought good or bad effects on their resilience.

Generally, the relationship between the level of perceived spousal support and the psychological resilience levels of married individuals is statistically significant. Spousal support predicts psychological resilience (Acibal, Kaya, Fernández-Batanero, & Akinci Çötök, 2023). This does not necessarily mean that married people are more resilient, but spousal support may contribute to psychological resilience.

2.3.3 Community-related factors

Since COVID-19 was a nationwide and worldwide pandemic, the whole society and community were related to each other. Thus, community-related factors played a significant role in the determinants of resilience. Medical practice was rewarded and valued by society and appreciated by people through Clap for Carers, a call initiated by citizens in the United Kingdom (Dalton, 2020). Applause showed the dignity and appreciation for the medical professionals. However, some reports indicate that the effect was limited, and workers sought more tangible rewards (Manthorpe, Iliffe, Gillen, Moriarty, Mallett, Schroder, Currie, Ravalier, & McFadden, 2022).

2.3.4 Virus-related factors

Generally, frontline health workers have more possibility of being infected (Vargese, S., 2021). Some research shows frontline health workers reported more severe anxiety, depressive symptoms, and insomnia (Spoorthy, Pratapa, & Mahant, 2020). Moreover, COVID-19 front liners had a higher prevalence of low resilience (Janitra et al., 2023). In simpler terms, frontline health workers were less resilient than non-frontline ones. Additionally, since it was a new unknown virus, they did not know how

to protect themselves from infection, even though they were specialist. Unsubstantiated rumours also caused them some consternation (Jafari et al., 2023).

2.3.5 Organisational factors

Organisational factors are influenced by employment status, working conditions, and satisfaction at the hospital. Many medical equipment, including N95 masks, were in short supply during the pandemic (World Health Organization, 2020). In addition, vaccination of healthcare workers, which should be a priority, was not initially available in sufficient quantities (Thepgumpanat & Wongcha-um, 2021). Private hospitals whose primary source of income is from foreign patients through medical tourism experienced a significant drop in revenue (Bloomberg News, 2020). Thus, there was also an impact on the working conditions for the healthcare workers who were their labourers.

As another organisational factor, an untrustworthy healthcare system led to psychological distress for medical professionals (Harris & Sandal, 2021). In other words, confidence in government and policy can improve their stress levels and enhance resilience.

2.3.6 Economic factors

Treatment of COVID-19 patients is less profitable than usual care because of the need for isolation to prevent infection (Ahangar et al., 2023). The number of patients that can be admitted is limited. Therefore, although reimbursement should be increased under harsh conditions, adequate compensation was not paid to medical providers (Satiani & Davis, 2020). However, due to the expert nature of healthcare workers, layoffs or the fear of losing income are expected to be relatively lower than in other industries (Preston, 2023).

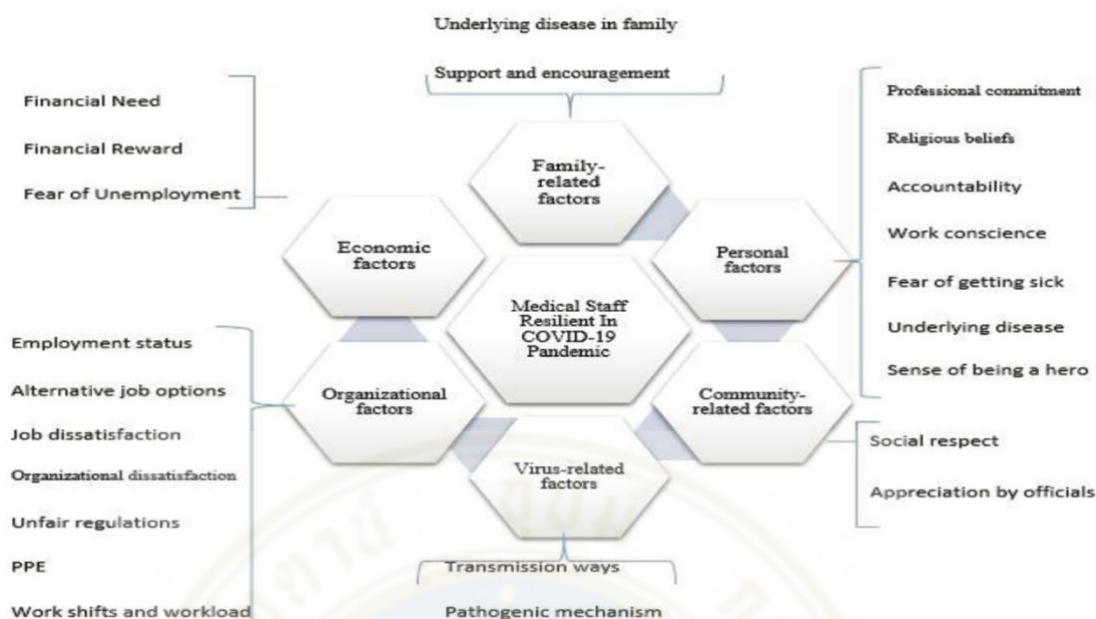


Figure 2.1 Factors affecting the resilience of medical staff during the COVID-19 pandemic

Source: Jafari et al. (2023)

2.4 Social support to enhance resilience in the medical industry

Social support encompasses assistance from one's social network, including family, friends, colleagues, and community members, to address mental and physical stress. This includes any support to deal with stress and difficulties in terms of mental and physical aspects (American Psychological Association, 2018). Recent studies highlight a strong link between healthcare workers' resilience and self-perceived social support, especially during challenges like the pandemic (Bozdağ & Ergün, 2021). Hence, emotional, instrumental, informational, and appraisal support become crucial in enhancing resilience during a crisis (University of Pennsylvania School of Medicine, n.d.). From a managerial perspective, providing social support to alleviate concerns can enhance resilience, improve performance, and prevent burnout.

In essence, intertwining social support and resilience is critical for supporting healthcare workers' mental health and well-being.

2.5 Conclusion

In conclusion, resilience is defined as essential for individuals to recover from setbacks, adapt to change, and overcome adversity. Mainly, it is required for healthcare workers who faced unprecedented challenges during the pandemic, including extreme stress, lack of resources, and constant infection risk. Resilience is an individual attribute, but also a multifaceted one that is influenced by various factors.

The impact of the pandemic on healthcare workers is analysed through several key factors: Personal, Family-related, Community-related, Virus-related, Organisational, and Economic factors. Results may differ between global and specific population studies, such as Hatefipour et al.'s study focused on a hospital in Iran. This can be attributed to differences in support systems, culture, and other factors. Thus, this paper's geographically focused study in Thailand might be worthwhile research, providing another perspective.

To increase resilience in the healthcare industry, strategies must encompass social support, organisational support, and appropriate mental health resources. These strategies are crucial for building certain resilience to navigate future crises effectively.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Primary Data Collection Method

The literature review gave us insight into general resilience and resilience in the pandemic situations. Moreover, factors of resilience and the importance of social support were also obtained. However, factors related to resilience vary by region and country since resilience is affected by variable elements. Therefore, this research focusing on Thailand, especially Bangkok area and medical professionals might be helpful and show us another perspective of resilience.

3.2 Interview Method

This paper emphasises qualitative research to obtain more nuance, actual experience, and difficulties that medical staff faced during the pandemic. Thus, face-to-face interviews are conducted using a semi-structured interview method (Jamshed, 2014). A semi-structured interview format is adopted to allow flexible responses, which makes participants share more nuance of their experiences, perceptions, and coping strategies in their own words. Each interview is conducted in English individually and audio recorded with their consent. Since all interviewees work in a hospital or clinic, if they are busy and cannot afford on-site interviews, online tools such as Zoom meetings are used to gather information. In any case, the focus remains on each interviewee's difficulties and experiences, which consistently benefits this study. This approach ensures a comprehensive understanding of resilience from multiple perspectives within the Thai medical field. Moreover, this methodological approach is designed to capture more nuanced ways healthcare workers have navigated challenges, adapted to stressors, and employed coping mechanisms. Thus, providing a detailed and nuanced understanding of resilience within the context of the Thai medical field during the COVID-19 pandemic.

3.2.1 Sample selection

For this study, 8 interviewees were selected for an interview who were working in a hospital or clinic as a medical professional during the COVID-19 pandemic. All interviewees were Thai clinicians providing medical care to patients directly. The specialists in this interview were diverse and included doctors, dentists, and nurses.

Table 3.1 List of interviewees

Code	Profession	Age	Gender	Marital Status
D1	Plastic Surgeon	41	Male	Married
D2	Orthodontist	38	Female	Single
D3	General Dentist	28	Female	Single
D4	Paediatrician	35	Female	Married
N5	Ophthalmic Nurse	26	Female	Single
D6	General Dentist	37	Male	Single
P7	Hospital Pharmacist	30	Female	Single
D8	Prosthodontist	38	Female	Single

3.2.2 Open-ended questions

Open-ended questions are selected for interviews, ensuring they obtain more nuance and actual experiences from each interviewee. Moreover, it gives interviewees more opportunities to answer smoother and more relaxed. The following questions are used as a basis, and additional questions are conducted according to the answers.

Interview Question 1: What was the most difficult challenge for you in your work during the pandemic? Please share examples of the situations.

Interview Question 2: How did you deal with your challenges during the pandemic?

Interview Question 3: What helped you most to overcome the challenges? (Personal strategies? Support from colleagues or support from the organisation?)

Interview Question 4: What is the difference between the general situation and the pandemic situation in terms of your stress and solution?

Interview Question 5: What are your lessons learnt during the pandemic? How do you think the lessons learnt during the pandemic will help you in future crises?

Interview Question 6: What support and resources did you find particularly useful to increase resilience at organisational (hospital), team (your department) and personal level?

3.2.3 Probing technique

While the semi-structured interview method has a pre-prepared list of questions, it also allows for flexibility in the dialogue. The probing technique is used to elicit deeper information and detailed insights from subjects using exploratory questions.

3.2.4 Interview

Interviews are conducted through face-to-face conversations individually. The location should be a familiar place to the interviewee, meaning workplaces or cafes around them. However, online tools such as Zoom meetings are also available based on request. Each interview takes around 1 hour. Before the interview, the purpose of this study, audio recording consent, confidentiality of personal data, voluntary participation, data protection, withdrawal rights, and contact information are explained in writing and verbally.

3.2.5 Research Framework

Factors contributing to resilience are classified into 6 categories based on the work of Jafari et al. (2023): Personal factors, Family-related factors, Community-related factors, Virus-related factors, Organisational factors, and Economic factors.

Specifically, personal factors such as age, gender, and marital status are considered during the analysis to discern which elements exert more stress on individuals or are most significantly impacted. Additionally, an exploration is undertaken to understand individuals' tendencies and strategies for facing difficulties, as well as to identify potential measures that organisations can adopt to enhance resilience and stress management in the future.

The main challenges are identified through interviews and then classified into pandemic-specified challenges. After that, their solutions and factors relating to

resilience are determined. Each factor is categorised into 2 aspects: internal and external factors, which are social support from families, friends, colleagues, and organisations. Furthermore, it is discussed how it is linked to their resilience during the pandemic.

The definitions of each element are as follows. Personal factors such as age, gender, and marital status are analysed to understand their specific impacts on resilience. For example, senior healthcare workers are hypothesised to exhibit higher resilience due to their extensive experience managing crises.

Pandemic-specific Challenges: Direct experiences, fears, and challenges faced during the pandemic, including exposure to the virus, workload increases, and shifts in responsibilities.

Internal Factors: Personal strategy, psychological resilience, emotional intelligence, and personal beliefs.

External Factors: Support from family, friends, community recognition, and organisational culture.

The responses obtained from the interviews are analysed in 2 ways: the thematic analysis and the comparative analysis. The thematic analysis identifies recurring themes related to resilience, stressors, and support systems. On the other hand, the comparative analysis examines differences in resilience factors across demographics (age, marital status) and professional roles.

This study focuses on healthcare workers in urban hospital settings in Thailand, which may limit the findings' generalisability to rural healthcare environments or other countries with different healthcare systems.

Finally, we propose specific policy recommendations to enhance healthcare workers' resilience based on our findings, such as improving access to mental health resources and adjusting work schedules to reduce burnout. Future research should explore the long-term impacts of pandemic-related stress on healthcare workers' mental health and resilience, particularly in low-resource settings.

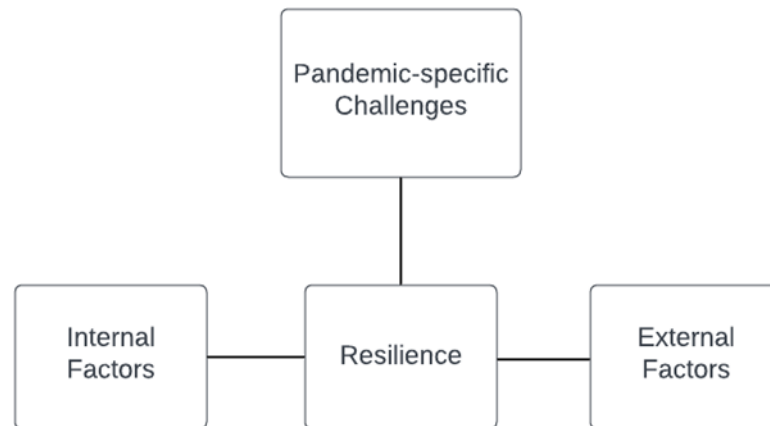
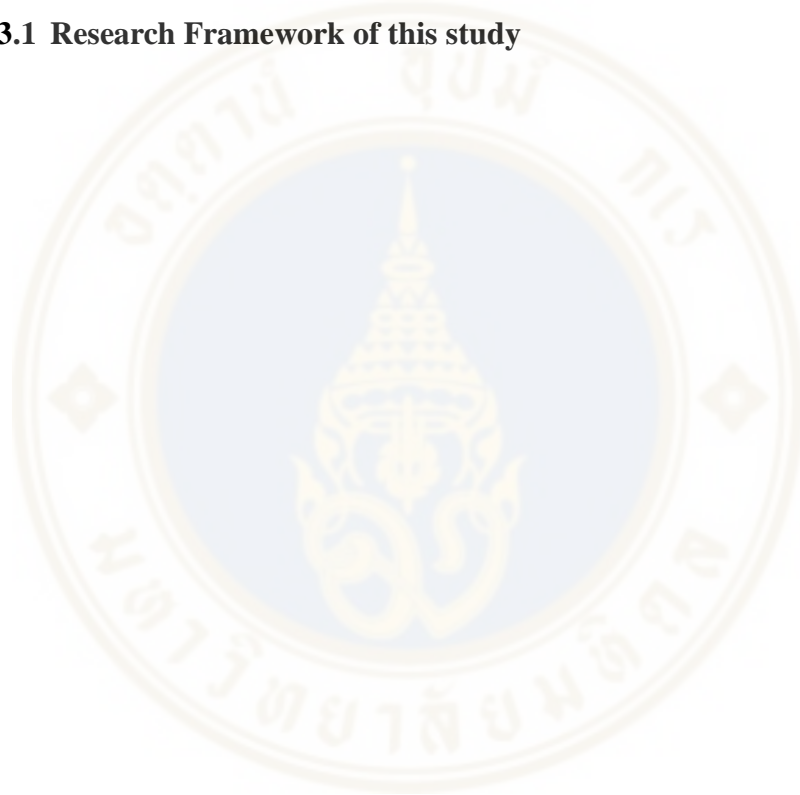


Figure 3.1 Research Framework of this study



CHAPTER IV

RESEARCH FINDINGS

After qualitative interviews, each participant's answers are analysed using the abovementioned methodology. Afterwards, the main factors for each dimension are identified.

4.1 Overview of Interviewee Demographics

To gain a broad understanding of Thai healthcare professionals' resilience, interviewees from various occupations, working sectors, ages, and living arrangement statuses were selected.

An overview of the interviewees is provided below.

Table 4.1 Interviewees' detail

Code	Profession	Sector	Marital Status	Age	Gender	Living arrangement status
D1	Plastic Surgeon	Public & Private	Married	41	Male	Lived with wife and 2 daughters
D2	Orthodontist	Private	Single	38	Female	Alone
D3	General Dentist	Public	Single	28	Female	Lived with her boss
D4	Paediatrician	Public	Married	35	Female	Lived with her husband
N5	Ophthalmic Nurse	Public	Single	26	Female	Lived with her colleague
D6	General Dentist	Private	Single	37	Male	Lived with his family
P7	Hospital Pharmacist	Public	Single	30	Female	Alone
D8	Prosthodontist	Public	Single	38	Female	Lived with her family

4.2 Main Challenges Faced During the COVID-19 Pandemic

4.2.1 Financial Instability

COVID-19 lasted a long time, leading to many job losses. Although economic hardship was a problem that many people faced during the pandemic, the medical industry was initially considered an exception due to consistent demand. However, 2 of 7 interviewees mentioned they faced financial issues during the pandemic. These were complicated by internal and external factors, such as differences between the private and public sectors and whether a person was married or not.

D1 worked full-time at a public hospital and part-time at a private clinic during the COVID-19. He mentioned that his main income was from the private cosmetic clinic, and its number of patients dramatically dropped. This greatly affected his financial stability. At the same time, he had a new baby. Thus, it was challenging for him to balance income and expenses.

D6 also faced financial instability since he quit his job to fear infection. He quit his job to avoid infection by his decision. This resulted from his more cautious approach to infection control, as he lived with his family including elderly people.

On the other hand, N5 and D8 did not face any financial difficulties. They worked at a public hospital, and her income was stable. They received an additional hazard allowance since they took charge of the COVID-19 ward. Their finances were somewhat better than before the pandemic. All other interviewees also did not report any financial difficulties. For the public sector only, this aligns with the findings reported by Preston (2023).

Economic deprivation is a complex combination of work systems, income components, and family structure. It was found that young healthcare workers with generally lower incomes who were single and/or had a low-spending lifestyle had a better balance between income and expenditure and were less financially stressed.

In addition, as discussed below, this was the most significant source of stress for those with financial difficulties. They were seeking more financial support to solve their problems.

4.2.2 Risk of Infection

All interviewees expressed concern about the risk of infection, both to themselves and their patients. Additionally, if healthcare workers became infected, they might spread the virus within the hospital.

D2 and D6 mentioned that due to the nature of dental treatment, patients have open mouths, and it is tough for dentists to prevent airborne transmission altogether. Moreover, some dental patients did not report their symptoms properly before visiting dentists. This patient's behaviour was hazardous as it put not only the dentist but also subsequent patients at risk of infection. D2 also recognised that patients were not being honest and reported that this harmed mental health.

D6 quit all private clinics to avoid patient infection and transmit the virus to his family. This is an extreme example, but it shows his initial pessimistic view of the pandemic. It also reflects his personality, which is mindful of more severe action.

Furthermore, many dental clinics and hospitals were not adequately equipped to prevent airborne transmission at that time. As PPE (Personal Protective Equipment) and other measures alone were insufficient to prevent infection, renovations of entire treatment rooms were required. After D6 quit his clinical job, he engaged in planning for the renovations.

As D8 was a specialist dentist, almost all her cases were elective. Thus, she was instead sent to support the COVID-19 scrub test. She felt a big fear of infection at that time.

In addition, N5 directly treated patients with COVID-19 also had a strong fear of infection. P7 was also a frontline worker in the ARI (Acute Respiratory Infection) clinic and a field hospital for some periods. As she lived alone, there was less concern about spreading the infection to her family. However, she also had a fear of infection. This is consistent with Spoorthy et al.'s (2020) study.

Even healthcare workers who did not directly contact COVID-19 patients, such as D1, D2, D3, D4, and D6, all expressed concern about infection to varying degrees. This is according to the department where they worked, their living arrangement status, and how they perceived it personally.

4.2.3 Work Disruptions

Their medical practice was disrupted by various factors, including a surge in patients, a lack of medical supplies and inadequate guidelines.

D3 faced challenges transitioning from a student to a practicing professional during the pandemic. Restrictions impacted her ability to complete the necessary clinical requirements for licensure, illustrating the pandemic's significant disruption to professional development and education. After becoming a dentist, she began living with her boss, who was not familiar with her, in a residence designated by the hospital where she worked. As a new dentist, she had a considerable amount to learn at the hospital, and the main problem was that she had no place to relax after returning home, living with her boss, with whom she did not feel at ease. These were not pandemic-specific worries; in other words, these significant worries were greater than those of the pandemic.

D2 stated that her main practice was regular monthly follow-ups. Some of her patients had difficulty attending regular visits due to reasons such as moving back to their hometown from Bangkok. The nature of orthodontics means that patients who stop attending regular follow-ups could significantly affect the treatment outcome. If the treatment results are unsatisfactory, her reputation as a dentist could be adversely affected.

D4 had to work in the internal medicine (adult) department, which was unfamiliar to her. Moreover, she was assigned an established telemedicine system during the pandemic to alleviate high demand. This project was also a new experience for her and a great challenge.

N5 needed to work as a frontline worker in the COVID-19 ward. As an ophthalmic nurse, she was not used to dealing with patients with severe symptoms and was unfamiliar with medical procedures such as intravenous drips.

P7 had several responsibilities and workplaces during the pandemic. At the same time, she worked at a government hospital, field hospital, and ARI clinic. Her work also included dispensing vaccines, maintaining a stock of medicines, and collecting information on COVID-19 and treatments; these were the first time for her.

The rapid increase in the number of COVID-19 patients showed that healthcare workers from other departments were also sent to help. Working in a department

they were unfamiliar with, without sufficient preparation time, was likely to have been a significant challenge for them.

4.3 Factors Influencing Resilience

4.3.1 External Factors

4.3.1.1 Public versus Private Sector Workplace

Whether they worked in the private or public sector is related mainly to the financial instability discussed above. Public hospitals are on a fixed salary system, and income may increase such as overtime pay and hazard allowance. The pandemic did not result in a pay cut or layoff in the public sector.

D1 mentioned that salaries from the public sector remained fixed and unchanged despite reduced workloads and a lot of free time in a public hospital. This means that public hospital working conditions were better than before the pandemic. Before COVID-19, his problem was that his over-work schedule meant he could not spend enough time with his family. But during the pandemic, it was the complete opposite. He recalled that COVID-19 was an excellent opportunity to spend more time with his family.

D4 also stated that her workload as a paediatrician was reduced during the pandemic. In addition, there was no financial impact on her due to the fixed salary system in a public hospital.

For P7, although her workload as a hospital pharmacist was decreased, new additional work was increased. It resulted in an increased workload. Yet, she had no financial difficulties because her workplace was a public hospital.

On the other hand, the decline in patient numbers was directly linked to decreased income in the private sector. D1 stated that cosmetic surgery was a non-urgent treatment, and patients from abroad could no longer come to Thailand. Since his primary income was from private clinics, he faced financial difficulties. The impact was particularly significant if the medical specialty was non-urgent or if foreign patients were the main customers.

4.3.1.2 Support from Family

Today's family forms are diverse, and the aspect of support varies from family to family. Yet, all interviewees emphasised some form of family support except P7. This is representative of the family-tied Thai culture and is remarkable. Family support was less physical. Many respondents stated that it was mental support, such as talking to family members, sharing their problems, and receiving positive words. For physical support, D4 mentioned that her family donated PPE and basic medical supplies to hospitals. D8 also emphasised support from family that her mother prepared meals and delivered them to her room in isolation.

However, if they lived with a baby or elderly family members, they were more careful about infection since they had lower immunity, such as D1 and D6. Thus, the presence of older people and a baby made them more nervous. Even so, they said that family was significant and positively impacted resilience rather than stress. Even when they did not live with family members, D2, D3 and N5 stated that they reduced the frequency of their return trips due to concerns about infection.

P7 said her mother was overly concerned about P7 since she was working as a front-line worker, which in turn caused her stress. Even though her mother is a good resource for resilience, her mother affected resilience negatively in the pandemic situation because of the infectious nature of her job and her mother's worries.

4.3.1.3 Support from Colleagues, Friends and Significant Other

During the pandemic, social distancing was recommended, and support from colleagues and friends was challenging to obtain. Even under its limitations, time with friends had a positive effect on many health professionals, as did family support. D3 and N5 stayed with their colleagues, which made it easy to share their challenges in the workplace and empathise with each other. N5 also stated that nurse culture means being friendly, supportive, and helping each other. Her senior nurse was also very kind. Thus, even though her workload increased, her workplace stress was not so high. It had an enormous positive impact on resilience. (D3 spent the first half of the pandemic living with her friend.)

D6 and D8 mentioned support from their loved ones, who lived separately. Since their loved ones were also dentists, they could easily share their work experience and discuss solutions with each other by phone, which was somewhat not to

be alone with them. D1 said that online drinking and talking with high school friends also helped to refresh him.

D4 realised that nurses know much about patients' feelings, which was helpful for her telemedicine project. She collaborated with multidisciplinary medical professionals such as nurses and pharmacists. Most people were cooperative and supportive.

4.3.1.4 Support from Patients

Patients were usually the recipients of treatment services, but D8 said that patient support was also encouraging. Some patients provided support to the hospital in the form of PPE, food, and donations. These acts showed the spirit of mutual help in Thailand. It seemed like a Thai culture of harmonisation, where the medical staff and patients were united to overcome this difficulty.

4.3.1.5 Support from the Organisation

Support from the organisation was observed to be very limited, highlighting challenges in resource allocation and personnel support during the pandemic.

D1 and P7 said that the hospital did not adequately provide PPE. They had to purchase it from their own pockets. They both emphasised facing difficulties due to the scarcity and surging prices of these essential items during the peak periods of COVID-19. However, P7 also mentioned that her organisation treated infected healthcare workers free of charge. This was one type of organisational support.

D4 mentioned that she suggested a simple telemedicine system using LINE application to alleviate some of the sudden increase in demand, and her supervisor promptly responded. Finally, the hospital embraced the idea. The general impression of public hospitals is that they are feudal and closed. Yet, her experience showed that her hospital quickly adopted her ideas and responded to the pandemic flexibility.

D2 said that her clinic developed new clinic guidelines for COVID-19. For example, they provided a disinfectant mouthwash process to patients before treatment. PPE was well provided to healthcare professionals by her organisation.

D8 considered her stable salary as organisational support. Since she could receive her salary as usual, she did not feel any financial anxiety during the pandemic.

These varied experiences suggested that while overall organisational support might have seemed limited, there were instances of significant adaptability and responsiveness.

4.3.1.6 Communication Technology

D1 found that technology was an excellent help for his work and daily life, although it could not completely replace his actual work. The pandemic limited communication methods with people, but people still wanted to communicate and share their concerns. Technology development helped improve resilience by making video calls more accessible and affordable. If the pandemic had occurred at a time when technology such as video calling was not available or when communication costs were high, people would have lost their means of communication. This would have had more severe consequences.

P7 and D4 also found IT technology to be a valuable resource for increasing resilience. P7 stated that academic conferences were held in online meetings, and telepharmacy was active in the workplace. Moreover, P7 provided a QR code to patients to show how to use a respiratory device instead of an actual demonstration in front of patients. D4 initiated a telemedicine system by using LINE app to check the symptoms of patients in isolation. These technologies not only made work more efficient, but also helped a lot in everyday life, such as communicating with friends.

4.3.2 Internal Factors

4.3.2.1 Professional Perception of Information

Since COVID-19 was an unprecedented virus, healthcare professionals who knew more about infectious diseases than the public also felt anxiety. In interviews, many respondents stated that they initially had a pessimistic perspective of the situation. But they settled into a more optimistic state of mind gradually as they became more informed. This is a characteristic of healthcare professionals, who place a premium on data and scientific evidence. This reflects individuals' professional perception of information as well.

D6, P7 and D8 stated that their perspective was relatively pessimistic at the beginning of COVID-19. However, they gradually tempered it by

learning about the virus because they obtained knowledge of how to protect themselves from the virus.

Moreover, many respondents actively searched the internet and social media for vaccine information. This was partly for the benefit of patients, but also for themselves and sometimes in response to family consultations. Many health professionals were looking for information about side effects and other risks rather than the benefits of vaccines. It suggested that many were concerned about vaccine safety.

For health professionals who practice evidence-based medicine, the gradual increase in scientifically based information as the pandemic continued positively affected resilience.

4.3.2.2 Adaptability

All healthcare workers were forced to change their working arrangements in some way. Although the change in working style is an external factor, how they perceive it depends on their coping strategy. This difference in perception is classified as an internal factor.

D4 helped the adult ward, even though she was a paediatrician. Moreover, she initiated a telemedicine project, which was very new to her. She was willing to help somewhat to alleviate the demand situation. She tried to take the initiative to deal with the problem herself rather than in a passive style.

N5 was also required to change the medical department to the COVID-19 ward. She needed to learn a new department and gain skills and knowledge. For example, IV drips were not a usual procedure in the ophthalmology department but standard procedures in the COVID-19 ward. Additionally, COVID-19 patients had relatively severe symptoms compared to ophthalmology patients. This led to high pressure on her at the beginning. She was exposed to many challenges and pressure, yet she considered these an opportunity. If she had not adapted to the situation, she would have worked only in the ophthalmology department, and her knowledge and skills might have been limited. However, she could learn many new things in the COVID-19 ward, and this experience will be helpful for her career.

D1 started his YouTube channel to advertise himself as a cosmetic surgeon since he had much free time. He also attended a business school to acquire new marketing skills. These activities provided a productive outlet for stress and a way to prepare for future uncertainties.

D6 started a new business analyst role to shift to a lower-infectious job. He was another good example of how to respond and be flexible in the face of a pandemic situation. He chose to focus on avoiding infection but also to take up new challenges by using his knowledge.

P7 mentioned that she feared infection but had to work as a pharmacist. I had no choice, she said. She accepted the situation as it was and did the job she was given to fulfil her professional role as a pharmacist. For private, she said that she used to like to go out with friends but could not do so during the pandemic, so she developed more hobbies that she could do alone. She spent time at home on TikTok and cooking.

From these, we can see that they were calm about the situation and saw difficulties as opportunities to start something new or improve their skills. Many respondents emphasised “Adaptability” and “Flexibility” as lessons learnt. Furthermore, they believe these lessons learnt are useful for future crises, not only pandemics but also any difficulties. It is also suggested that a growth mindset that accepts the pessimistic situation with an open mind and sees it as an opportunity is beneficial for stress management and resilience.

4.3.2.3 Sense of Responsibility

Due to the infectious nature of COVID-19, there was a concern that if they became infected, they might spread it to their colleagues and family members. Therefore, all the interviewees considered it their duty as healthcare workers not to be infected than others.

D1's experience of having a new baby during the pandemic suggested that family responsibilities significantly affect resilience. The need to provide and protect their families added pressure and motivated medical professionals to find ways to overcome the pandemic's challenges.

P7 said that we had to be a good example to show society as a professional. If she were to become infected, the timeline of her behaviour would be

published in detail, and society could criticise her. She would also have to leave work if she were to become infected, leading to an increased workload for her colleagues. These statements showed her sense of responsibility to society and her colleagues.

According to their response, a person with high responsibility seems to have high resilience. This corroborates the results of Douillet et al. (2021). High responsibility can be a family, society, or any type of role. Although greater responsibility means more challenges to face, it is suggested that people can work harder for others than for themselves, which positively affects resilience.

4.3.2.4 Personal Financial Management

As mentioned above, financial instability was the main challenge for some of them. The D2 situation underscored the impact of personal financial management on resilience. She had many fixed patients, which meant the decline in patients during the pandemic was not financially fatal. Another factor could have been that she was single, so her expenditures were relatively easy to control. However, she said many dentists in her workplace had lost patients and faced financial difficulties.

D3 stated that she was a new dentist and was not treated well, but she worked in a rural hospital, which kept her expenditure down. Therefore, there was no financial stress.

These showed that having a high income is not simply necessary, but a stable income and controlling the balance between expenditure and income are more critical for resilience.

CHAPTER V

RECOMMENDATIONS AND CONCLUSION

5.1 Conclusion

In conclusion, this research has provided valuable insights into the resilience of Thai healthcare professionals during the COVID-19 pandemic through an in-depth analysis of interviews with 7 diverse participants. These findings have highlighted the multifaceted nature of resilience, influenced by a combination of external factors and internal factors. Just as physical fatigue is related to mental health, external and internal factors influence each other.

The challenges faced by healthcare professionals were varied and significant, ranging from financial instability and the risk of infection to disruptions in their medical practice. Financial instability was a critical concern, particularly for those in the private sector or with dependents, underscoring the importance of stable income and effective financial management.

Healthcare professionals demonstrated a commendable ability to obtain and process information, adapt to new challenges, manage personal and professional responsibilities, and maintain a balanced perspective on their financial situation. Their coping strategies reflected a growth mindset, viewing the pandemic as a crisis to be managed and an opportunity for personal and professional development. Thai healthcare workers also had a harsh working environment before the pandemic, suggesting they initially had high resilience since before the pandemic. Many healthcare professionals were flexible in the situation and actively embraced technology, including telemedicine.

Regarding external factors, the importance of family and connections with friends and significant other were emphasised. When friends and significant others are in the same profession, they can share similar concerns, and their role is more substantial. Surprisingly, there was almost no mention of prayer or meditation. This differed from the initial expectation that the role of religion in Buddhist Thailand might be highly relevant to resilience.

The challenge is that networking is important, but it is also necessary to find ways to relax and do things independently. In today's rapidly changing world, the ability to flexibly adapt without sticking to old methods will be in even greater demand.

5.2 Recommendations

5.2.1 Collaboration between the private and public sector

According to interviews, the gap between the public and private sectors is enormous. They faced different kinds of challenges. Healthcare workers in the private sector lost their work and income due to a decline in the number of patients. In a crisis, a partnership that allows public hospitals to utilise the medical resources of private hospitals mutually would be effective. Nowadays, the National Health Security Office (NHSO) works with private hospitals, and this trend is expected to accelerate in the future (National Health Security Office, 2023). Medical personnel working in private hospitals would also be able to earn a certain amount of income, which would help towards financial stability.

For example, dentists are generally used to injecting anaesthesia into the oral area. Although intramuscular injections can typically be administered by dentists for only limited treatment, using dentists as vaccinators in emergencies is an effective use of medical resources. This also helps public hospitals maintain an excellent work-life balance and helps improve resilience.

5.2.2 Supporting Professional Development and Adaptability

Adaptability will continue to be in great demand and must be encouraged both individually and at the organisational level. Encouraging ongoing education through online courses, workshops, and seminars is essential. It is crucial to focus more on information technology, such as telemedicine, and to create a corporate culture that can adopt new technologies without resistance.

Moreover, cross-department learning is effective for each professional in expanding their knowledge, skills, and career, as N5 mentioned. As D4 has gained a better understanding of the nursing profession through the telemedicine project, this also

contributes to developing mutual understanding and respect for each other's professions. To support this type of learning, support systems should be established to aid healthcare workers who may need to work outside their specialty areas or are willing to work cross-department. Regular social events and study groups with other professions allow the sharing of knowledge and gaining different perspectives.

Furthermore, publicly announcing and physically rewarding healthcare professionals who have achieved remarkable results or helped other professions can help maintain their motivation for growth. While these are not resilience-specific solutions, they enable the organisation to motivate healthcare workers, encourage their growth mindset, and prepare them for future crises.

5.2.3 Strengthening Social Support Networks

Strengthening social support networks is crucial for the well-being and resilience of healthcare professionals, especially in times of crisis. Effective social support can mitigate stress, prevent burnout, and enhance overall job satisfaction.

Nursing culture, which supports each other in a friendly way, can be a good model case, as N5 stated. The organisation should create structured peer support programs that pair healthcare workers with colleagues who can offer empathy, guidance, and support based on shared experiences. This program particularly benefits new staff or those transitioning to different roles. Regular opportunities for discussion allow individuals to evaluate their problems and assess if the workload is unfairly distributed among team members.

Regular networking events, workshops, and conferences, both virtual and face-to-face, are also effective ways to expand contacts and foster a sense of community. For example, a younger nurse who is familiar with IT could teach an older doctor who is not familiar with IT. This would help to create a network that transcends each other's professions and generations. In Thai culture, some older people may be reluctant to be taught by younger people. However, this kind of cross-generational teaching benefits individuals and organisations, and the organisational culture needs to be nurtured to be flexible and accepting.

5.2.4 Strengthening Adaptability and Flexibility

“Adaptability” and “Flexibility” are essential factors that will continue to be needed to maintain resilience, as many interviewees pointed out. While organisational support structures are important, as mentioned above, it is also recommended that individuals adopt strategies to improve their flexibility. Based on their effective solutions, many respondents adapted to new situations by starting new things such as attending business school, initiating new projects, acquiring new medical skills, engaging with YouTube, and exploring cooking.

For instance, seeking new experiences and challenges in the workplace is an excellent behaviour to improve the ability to adapt to new situations. After a new role or challenge, it is also valuable to practice seeking feedback from others, accepting it, and improving the next time.

These practices will lead to greater personal flexibility. Moreover, taking up a new hobby also creates a change in life. Hobbies that can be enjoyed alone are crucial in situations such as pandemics. Thus, it is better several types of hobbies they have.

5.2.5 Acknowledge Own Acceptable Risk Balance

The interviews revealed significant differences in workload and financial insecurity between the private and public sectors and between different departments. In simplified terms, private sector income is usually higher, but income is more volatile in crises such as pandemics. Public sector workers have lower incomes than private sector workers, yet they also have more stable incomes during crises.

It is recommended that each individual know their acceptable risk level according to their family structure, the plan of marriage, a baby, and preferred lifestyle. If they are single and have no marriage plan, they can accept relatively high risk because of low responsibility. Therefore, working in the private sector can be appropriate and vice versa.

5.2.6 Strengthening Individual Network

As many respondents mentioned, communication with others, such as family, friends, and colleagues, significantly impacts resilience. In other words, expanding individual networks regularly helps to improve resilience. Active

participation in professional conferences, seminars, and workshops is recommended for building new networks.

In addition to making new contacts, it is essential to maintain regular contact and relationships. Individual network means not only a number of contacts but also the quality of the relationship. Regular events, such as end-of-year parties and university alumni reunions, are also highly encouraged to enhance their networks. Utilising digital platforms such as LinkedIn, Facebook, and Instagram can also be invaluable for maintaining relationships. Communication on digital platforms is relatively easy, even during busy days. These networks can be energies to keep their resilience in the future, and they can also be resources for others' resilience.

5.3 Limitations of the Study

This study has several limitations that should be considered. It involved male and female healthcare professionals aged 26-41 working in public and private hospitals or clinics in the city area. This specific demographic and geographic focus may limit the generalisation of the study outcome and recommendation.

Additionally, family structures and medical specialties vary. This means that recommendations derived from the study cannot be universally applied to all healthcare professionals.

Consequently, the study offers valuable insights into the factors affecting resilience among healthcare professionals during the COVID-19 pandemic. However, it should acknowledge the complexity of resilience, which is influenced by numerous variables. Since there is no one-size-fits-all approach to enhancing resilience, the factors of resilience and its solutions might vary by individual.

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