

Compassion Fatigue on Rescue Area: A Scoping Review

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Abstract. Working as first responders requires officers to be in a state of full awareness of preparedness, thus allowing compassion fatigue to occur. Compassion fatigue is one of the psychological problems associated with exposure to stress secondary traumatic disorder and burnout. The study focuses on how and what compassion fatigue happen to first responders in dealing with natural disaster using scoping review. The study used scoping review with the Scencedirect and ProQuest databases which of the 402 research articles used 3 articles that had been reviewed and analyzed using descriptive narrative analysis techniques. Result found that compassion fatigue can be realized or not by first responders. Apart from that, workplace conditions and field conditions also influence the compassion fatigue experienced by first responders. However, despite facing compassion fatigue, concern for others and the environment is one of the reasons first responders remain serious about carrying out their duties. Further research is recommended on compassion fatigue experienced by the first responders in Asia, including shift work consequences and coping strategies for psychological disorders.

Keywords: compassion fatigue, disaster, first responders, rescuer

1 Introduction

Indonesia is one of the countries in Asia that is on the phase with three large and active plates that cause frequent earthquakes and is in the circle of volcanic mountain rings that result Indonesia has many volcanoes and in active status¹. With these conditions, Indonesia has quite a few challenges in dealing with natural disasters, from earthquakes to volcanic eruptions. During 2023, more than 4.940 disasters have occurred in various parts of Indonesia². Some of them are major natural disasters and take many lives. Despite the recurrence of disasters every year, there is a need for awareness of precaution in the face of recurring disaster.

¹ Suprayitno, A., Nugraha, A. S. A., Isrianto, P. L., Litaay, C., Nisa', T. F., Larasati, D. A., rustriarini, N. W., Utama, A. A., G. S., & Roosinda, F. W.: Kebencanaan dalam berbagai perspektif ilmu. Qiara Media (2021)

² CNN Indonesia TV.: Video: BNPB catat 4.940 bencana sepanjang 2023, korban meninggal 267 orang. <https://www.cnnindonesia.com/tv/20240112172347-407-1048812/video-bnpb-catat-4940-bencana-di-2023-korban-meninggal-267-orang>

According to Prata and Gischa, in disaster management in Indonesia, there are institutions that play a role in disasters management, such as BNPB (National Agency for Disaster Countermeasure), BASARNAS (National Search and Relief Agency), PMI (Indonesian Red Cross Society), PVMBG (Vulcanology Survey Indonesia), as well as other institutions³. This is supported by a Munthali et al research that found that communities living in disaster-prone areas need awareness and emergency preparedness about disasters facing them, thereby enhancing collaboration among community members and preventing unnecessary deaths⁴. Natural disaster response officers are directly involved in disaster management in various areas, including providing psychological and medical rehabilitation. In these circumstances, government-owned public services such as medical institutions and disaster response agencies have an important role to play in providing accurate pre-disaster information to post disaster management services.

Working as a first responders requires a variety of skills and good physical health to provide active and effective evacuation assistance. However, even though the first responders came down for maximum handling and evacuation, the process was risky and many parties demanded that first respondents work harder. Besides, working as a first responders can present challenges and workloads. When the first responders are unable to cope with such challenges and burdens, they can be in a situation of saturation and depression, and potentially experience compassion fatigue.

Figley conceived compassion fatigue as a state of biological, psychological, and social fatigue and dysfunction caused by prolonged exposure to compassion stress and overall events. Cocker and Joss defined compassion fatigue is defined as a stress phenomenon experienced by an individual who has suffered a trauma that produces extreme tension with emotional pain and/or physical stress of the individual assisted. This trauma can also create a Secondary Traumatic Stress Disorder (STSD) and when combined with burnout it can cause compassion fatigue caused by fatigue to cope with everyday environmental situations⁵. Lynch and Loboconcluded that compassion fatigue is the result of a change in the empathy ability of the individual who performs treatment in response to prolonged and burdensome stress during treatment⁶. In other words, it is mentioned that individuals who have jobs that are oriented to service to society such as first responders have an increased risk of interacting with individuals

³ Prata, C. D., & Gischa, S.: Lembaga-lembaga yang berperan dalam penanggulangan bencana alam. www.kompas.com/skola/read/2020/12/02/155257469/lembaga-lembaga-yang-berperan-dalam-penanggulangan-bencana-alam?page=all

⁴ Munthali, C., Outwater, A. H., Mkwinda, E.: Assessing knowledge of emergency preparedness and its association with social demographic characteristics among people located in flood-prone areas of Chibavi and Chiputula in Mzuzu City, northern Malawi. Vol. 101, pp. 1-6. International Journal of Disaster Risk Reduction (2024)

⁵ Cocker, F., & Joss, N.: Compassion fatigue among healthcare, emergency and community service workers: A systematic review. Vol. 13(6), pp. 1-18. International Journal of Environmental Research and Public Health (2016)

⁶ Lynch, S. H., & Lobo, M. L.: Compassion fatigue In family caregivers: a Wilsonian concept analysis. Vol. 68(9), pp. 2125-2134. Journal of advanced nursing (2012)

who are experiencing trauma and in turn increase the likelihood of exposure to traumas and generate compassion fatigue.⁷

This is supported by a study conducted by Kim et al, which found that compassion fatigue moderates the influence of environmental risk factors with burnout. It can be interpreted that when compassion fatigue increases, then the impact of environmental risk factors on it increases. However, it was also found that when compassion fatigue is low, then the burnout level will not increase despite the environmental risk factor is large.⁸

In this case the environment can be a potential risk factor for the first responders, such as exposure to toxic chemicals that emerge from the environment evacuated first responders which is fatal to the breathing, high noise of the evacuation site also generates the possibility of physical stress and psychologists, lowering productivity, and disrupting both communication and concentration of first respondents^{9, 10, 11}. The findings of Kim et al were supported by an investigation by Burnett and Wahl which found that compassion fatigue and burnout have a significant relationship. When first responders experience compassion fatigue, it can affect how they perform their jobs¹². This was found by Ren & Zhang, who discovered that factors such as work intensity, speed, psychological conditions, environment, and time can contribute to increased fatigue and lead to a decline in performance due to accumulated exhaustion, which can increase accidents and errors.¹³

Therefore, it is important to know the impact on first responders who experience compassion fatigue. This study aims to examine further the compassion fatigue experienced by first responders who are directly involved in the evacuation process of natural disaster by looking at the psychological impact and its impact on the health of first responders.

Research Question

This research has two questions: 1) how compassion fatigue happen to first responders in dealing with natural disasters through the studies? 2) what is it that needs to be taken care of to overcome or prevent compassion fatigue on first responders?

⁷ Russo, C., Aukhojee, P., Tuttle, B. M., Johnson, O., Davies, M., Chopko, B. A., & Papazoglou, K.: Compassion fatigue & burnout. In Kontantinos Papazoglou, & Daniel M. Blumberg (Eds.), Power (pp. 97-115). Academic Press (2020)

⁸ Kim, R., Jung, H. H., & Jue, J.: The moderating effect of compassion fatigue in the relationship between firefighters' burnout and risk factors in working environment. Vol. 23(11), pp. 1491-1503. Journal of Risk Research (2020)

⁹ Brandt-Rauf, P. W., Fallon, L. F., Tarantini, T., Idema, C., & Andrews, L.: Health hazards of fire fighters: Exposure assessment. Vol. 45, pp. 606-612. Occupational and Environmental Medicine (1989)

¹⁰ Guidott, T. L., & Clough, V. T.: Occupational health concern of firefighting. Vol. 13, pp. 151-171. Annual Review of Public Health (1992)

¹¹ Occupational Safety and Health Administraton.: Occupational Noise Exposure: Health effects. United States Department of Labor. <https://www.osha.gov/noise/health-effects#>

¹² Burnett, H. J. J., & Wahl, K.: The compassion fatigue and resilience connection: A survey of resilience, compassion fatigue, burnout, and compassion satisfaction among trauma responders. Vol. 17(1), pp. 318-326. Faculty Publication (2015)

¹³ Ren, Z., & Zhang, Q.: Volunteer dispatch considering fatigue effect and satisfaction in emergency situation. Vol. 6(14). Discover Applied Sciences (2024)

2 Method

2.1 Study Design

The method used in this article is scoping review using the PRISMA-ScR (PRISMA Extension for Scoping Reviews) guideline. There are several steps taken in scoping process in this review: 1) determining the topic and purpose on the research; 2) examining keyword combination as well as the inclusion and exclusion criteria to be used for the selection of articles by checking the title, abstracts, and research results in the selected database; 3) screening relevant studies to answer research questions; 4) overview of the data that has been found is carried out by making a table to review the contents of the article which includes the author's name, the title, the purpose of the research, the country of the study, the methods used, the samples involved, the findings, and future research; 5) further review by conducting descriptive data analysis.

2.2 Research Procedures and Data Sources

In order to identify relevant articles, a keyword combination is compiled to focus on research questions. Keywords combination used is "compassion-fatigue" AND "rescuer" OR "first responders" AND "disaster". Literature searches were done on the Sciencedirect and ProQuest databases.

The inclusion criteria used are research articles that published between last ten years (2015-2024), written in English with psychological subjects, article full-text, and discussing compassion fatigue among first responders dealing with natural disasters.

Data that will be extracted from articles consisting of articles' title, year published, journal's name, country, number of samples, methods used, research design, and results. Limiting the risk of bias from the data chosen for analysis is by selection of articles whose title and content of the article really discuss compassion fatigue experienced by first responders. So the article chosen is an article that clearly states compassion fatigue experienced by first responders in dealing with natural disasters. Data will be analyzed using descriptive narrative analysis techniques. The review is conducted to answer research question.

3 Result

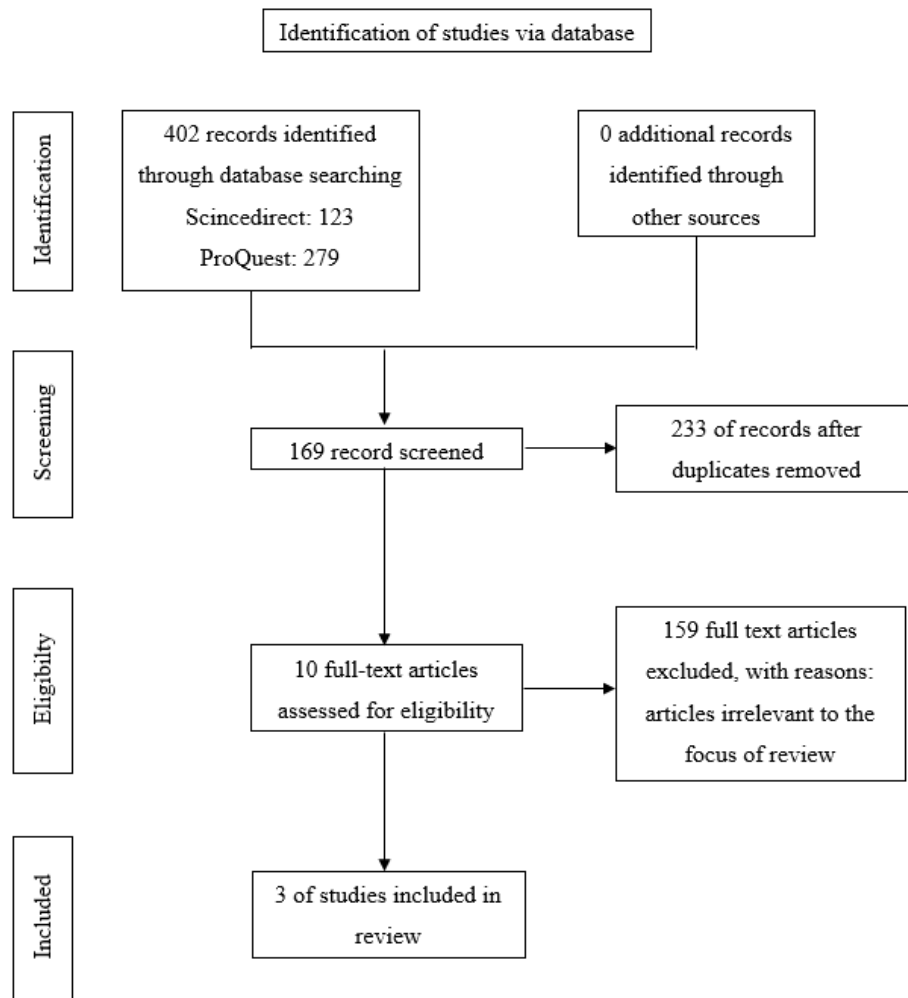


Figure 1. Flowchart in article selection using PRISMA

Initial searches from two databases resulted in 402 articles, with the exception of 233 articles that were duplicates and 156 articles that did not relate to research purposes. Ten articles were then re-filtered based on the focus of the literary review, and seven articles were removed. Finally, three articles are included in this literature review.

3.1 Study characteristics

In this scoping review, three studies that have been selected based on inclusion criteria are merged. The studies were conducted in Europe and Australia, but no studies were found elsewhere. There are two quantitative studies and one qualitative.

3.2 Participants

One study focused on female participants, one focused only on subjects that were incorporated into the local red cross, and the last study focused on local red cross and local church followers.

Table 1. Exposure from Article Selection

Authors	Title	Purpose	Country	Method	Sample	Findings	Future Research
Colpizzi et al (2024)	Individual Differences in Risk and Protective Factors: The Role of Self-Compassion Components among Emergency Responders	In order to maximize well-being and work effectiveness under high-stress circumstances, this study examines individual variations in protective and risk factors among rescue workers (RWs), especially Red Cross members.	Italia	Quantitative; Instruments: Self-Compassion Scale (SCS), Neo Five-factor Inventory (NEO-FFI-60), Coping Orientation to Problems Experienced (COPE), Multidimensional Scale of Perceived Social Support (MSPSS), Impact of Event Scale-Revised (IES-R)	Rescue-workers from Red Cross (n=791)	There are two psychological profiles, such adaptively resilient and maladaptively vulnerable.; Maladaptively vulnerable individuals show higher self-judgment, social isolation, and emotional over-identification; It is noted that social support affects resilience and mental well-being.	Suggests a method for identifying RWs needing specialized support and proposing interventions enhancing self-compassion.
Frazer et al (2022)	Exploration of potential indicators of burnout, psychological distress and post-traumatic stress disorder, among Australian female first responders	Exploring psychological well-being of female first responders	Australia	Quantitative.; Instrument: Quality of Life (ProQol), Kessler Psychological Distress Scale (K10), PTSD Checklist (PCL-5)	Australian female first responders; currently employed (paid or voluntary) (n=286)	Moderate burnout and high scores for combined PCL-5/ K10; Strongest indicators of moderate burnout: <12-hour break, exposure to gossip, insufficient time; Strongest indicators of higher PCL-5/K10 scores: unpleasant teasing, work and home pressure, physical violence, and unexpected death.; Workforce stressors have more	Research on female FRs' psychological wellbeing and exposure to lifetime trauma/assaults is needed, along with ensuring workplace support through

						impact on female FRs' psychological wellbeing than lifetime traumatic exposures	counselling, mentorship, and specialized services.
Eriksen (2019)	Coping, caring and believing: The embodied work of disaster recovery workers	Study explores embodied experiences of coping, caring, and believing in the context of increasing disaster frequency, particularly bushfires.	Australia	Qualitative.; Semi-structured interviews	Red cross and church followers who jumped as disaster response officers (n=18)	Participants described that “faith of some description” was the reason participants chose to work in disaster recovery which was a fundamental belief in the inherent good of mankind. However, there is a reflection that there are psychological consequences of catastrophic recovery positively and negatively from short- and long-term duties, that is to say to physical, emotional, and spiritual well-being.	It is necessary to conduct an in-depth interview and explore the possibility that there is a psychological picture of the officers who cares about compassion fatigue.

Based on the review of research articles on first responders working in disaster areas, the findings indicate the following: First, first responders who experience compassion fatigue are aware of how to cope with the symptoms and effects of compassion fatigue. In this regard, it was found that when first responders realize they are experiencing stress or trauma after helping others, they can be categorized into two types of psychological profiles: the adaptive psychological profile, which refers to resilience, and the maladaptive vulnerable psychological profile, which tends to use avoidance coping mechanisms, especially when facing traumatic stress. The maladaptive vulnerable psychological profile has a higher tendency towards self-judgment and social isolation, resulting from the use of avoidance coping mechanisms, as well as emotional over-identification, which negatively impacts mental health. In this case, it is known that the psychological profiles were obtained based on a combination of personality traits, strategies for coping with the impacts that occur, significant life events, and how the influence of social support networks plays a role.

Furthermore, female first responders were found to have higher levels of compassion fatigue compared to male first responders. It has been found that the influence of the work environment is one of the factors why female first responders may experience burnout leading to compassion fatigue, which is caused by breaks of less than 12 hours, dissatisfaction with work-life balance, and psychological pressure. In his findings, there is an influence from the work environment such as exposure to gossip that tends to lead to bullying, which decreases self-confidence, the impact of unpleasant teasing, work and home pressure, physical violence, and the unexpected death of close ones also being one of the factors that first responders experience compassion fatigue. Additionally, it was found that female first responders who have experienced rape or sexual assault have an impact on the burnout levels of female first responders as an effect of PTSD, even though the rape or sexual assault was not known to have occurred after officially becoming first responders or before becoming first responders. However, the findings clarify how the complexity between fatigue, psychological pressure, and personal traumatic events influences compassion fatigue.

However, even though it is known that first responders will experience various impacts as a result of providing direct assistance in disaster areas, first responders remain aware that offering such services is a choice made by themselves and believe it is a form of compassion for others, justice in social conditions, as well as a manifestation of religious faith and a practical expression of God's love. In his findings, it was noted that "connection" and "providing support to others" can be considered the foundation of various responses, including spiritual, psychological, and physiological. The response arises as a result of both the short-term and long-term effects of their work on physical, emotional, and spiritual well-being, which demonstrates how practices, experiences, and faith manifest through love for God and others, existential questions, forgiveness for oneself and others, or blame towards oneself or others.

4 Discussion

This article aims to answer the research question, namely how compassion fatigue occurs in the first responders as a member of the disaster management agency and what happens when compassion fatigue is studied to the first responders. This discussion will explain more about compassion fatigue in first responders involved in disaster response.

As first responders, they are required to be ready at every opportunity for 24 hours. This is supported by Sheard et al statement that as a result of increased demand for 24-hour services available, shift work has become commonplace in the public service sector. Therefore, it is known with certainty why the agencies that host first responders divide their officers according to shift work, which is a work schedule that is outside the traditional office hours so that it is often found that there are morning, afternoon, and night shifts in which the schedule is fixed or shifted. A study by Sheard et al found that officers who worked 24 hours had a higher compassion fatigue¹⁴. This is supported by Nowak and Łukomska's study which found that differences in job specifications can contribute to shift work with sleep and worker health.¹⁵

Health disorders can also influence how first responders are aware of risk factors and protective factors. Risk factors have their influence on increasing the likelihood of negative and maladaptive psychological conditions, whereas protection factors have the influence to reduce the negative impact of stress situations. This has been studied in the study of Colpizzi et al which found that the resilience of first respondents is a protective factor that can protect first responders from psychological disorder and will have a positive impact on psychological well-being. Furthermore, it was found that the long-term adverse effects and the use of coping mechanisms avoidance in the face of stress and trauma are among the risk factors that are vulnerable to workers with a psychological profile “float”. First responders who have a “float” psychological profile tend to be at risk of increased susceptibility to traumatic stress and have a tendency to have adverse coping strategies. In addition, the negative impact of over-identification on self-suffering on mental health conditions has been found. Over-identifying with personal suffering can lead to a double threat to psychological well-being, because it correlates positively with compassion fatigue and negatively with resilience¹⁶. Excessive identification with personal emphasis is often carried out in the form of confusion in various contexts, such as when something makes an individual disappointed then it can be embedded in a sense of self or a view of events that are relatively temporary and viewed as something certain and permanent based on self-experience over time.¹⁷

The results of Colpizzi et al study supported by Kaltsouda et al research that found that emotional defensiveness as a coping strategy tends to affect the mental and physical components of the health-related quality of life differently which allows for defensive behavior and depression¹⁸. It also supports the findings of Burnett and Wahl which found that disaster behavioral health and emergency responders are likely to be at risk of depression and other psychological disorders that are characteristic of first responders who have treated individuals who have suffered trauma.

¹⁴ Sheard, I., Burnett, M. E., & Clair-Thompson, H. S.: Psychological distress constructs in police with different roles. Vol. 8(3), pp. 264-279. *International Journal of Emergency Services* (2019)

¹⁵ Nowak, K., & Łukomska, B.: The impact of shift work on the well-being and subjective levels of alertness and sleepiness in firefighters and rescue service workers. Vol. 27(4), pp. 1056–1063. *International Journal of Occupational Safety and Ergonomics* (2021)

¹⁶ Colpizzi, I., Berti, C., Sica, C., Alfei, V., & Caudek, C.: Individual differences in risk and protective factors: the role of self-compassion components among emergency responders. Vol. 14, pp. 1-14. *Behavioral Sciences* (2024)

¹⁷ Neff, K. D.: Self-compassion: Theory, method, research, and intervention. Vol. 74, pp. 193-218. *Annual Review of Psychology* (2023)

¹⁸ Kaltsouda, A., Skapinakis, P., Damigos, D., Ikonomidou, M., Kalaitzidis, R., Mavreas, V., & Siamopoulos, K. C.: Defensive coping and health-related quality of life in chronic kidney disease: a cross-sectional study. Vol. 12(28). *BMC Nephrology* (2011)

A study by Frazer et al found that there was a complex interaction between fatigue, psychological stress, and personal traumatic events in the first responders with the female gender. In his research, fatigue was associated with returning to work when hours of rest felt insufficient so that he felt that he had not enough time to do what he wanted and was stressed. Moreover, the fatigue experienced by the first responders was linked to a lack of confidence and respect in the working environment caused by stress in the workplace such as extortion and things that violate the domain of justice and values, thereby undermining and weakening confidence as well as the ability to integrate and perform roles successfully. However, the association with the death of someone close to the first responders officers unexpectedly became one of the points found in this study where the highest score on compassion fatigue was found on the declaration of a nearest person's death unpredictably. Moreover, it is assumed in this study that gender inequality, such as lack of trust and justice or respect in the workplace that occurs can be one of the causes of compassion fatigue.¹⁹

Eriksen's research found that the red cross in Australia realizes that disasters can crush assumptions and controls and create intense struggles in using logic to cope with situations faced. Besides, there is a reflection on how the psychological consequences of disasters give much meaning, such as being a test of faith but also being a property that emerges in disaster recovery. Furthermore, it was found that the values of social justice formed an important foundation in upholding the profound truth that bridges the various organizational frameworks of health care. Therefore, the impulse of motivation to care for others and oneself through disaster recovery efforts is regarded as an embodiment of faith and expression of love taught by religion. It was also found that first responders officers gain from the positive and negative impact of the task in the short and long term, that is, on physical, emotional, and spiritual well-being. In the interview, it was revealed that there are indications of compassion fatigue among the first responders officers. In an interview, one of the volunteers stated that they are aware of the very direct relationship between compassion and vulnerability. In-depth interviews and exploring the potential psychological profile of first responders.²⁰

Therefore, it is necessary to conduct an in-depth interview and explore the possibility that there is a psychological picture of the first responders that leads to compassion fatigue. This was supported by a Pietrantonio and Prati study that found that first responders with female gender had a tendency to experience compassion fatigue.²¹

From this discussion, it can generally be drawn that the work shift, the consequences of work that lead to risk factors of psychological disorder, and coping strategies used in dealing with psychological disturbances such as stress, trauma, and burnout have their influence on the compassion fatigue of first responders. However, it is necessary to re-examine whether the shift work consequences leading to psychological risk factors, and the coping strategy used to deal with psychologic disorders like stress, traumatism, and burnout significantly affect the preparedness of first responders when related to natural disasters.

It should be noted that the compassion fatigue research that first responders have in the management of natural disasters is still very small and not very profound, especially in the Asian

¹⁹ Frazer, H., Hansen, C., Searle, A., Larence-Wood, E., & Van Hoof, M.: Exploration of potential indicators of burnout, psychological distress and post-traumatic stress disorder, among Australian female first responders. Vol. 316, pp. 1-11. Psychiatry Research (2022)

²⁰ Eriksen, C.: Coping, caring and believing: The embodied work of disaster recovery workers. Vol. 32, pp. 1-9. Emotion, Space and Society (2019)

²¹ Pietrantonio, L., & Prati, G.: Resilience among first responders. Vol. 8, pp. S14-S20. African Health Sciences (2008)

region. Therefore, it is highly recommended that further research be carried out on compassion fatigue experienced by the first responders in Asia, especially on various aspects such as shift work consequences of work leading to risk factors of psychological disorders, and coping strategies used in dealing with psychological disorders such as stress, trauma, and burnout by first responders active in disaster-prone environments affects their daily activities outside of work as first responders.

5 Conclusion

Based on the expression of the literature done, it can be seen that overall first responders have many vulnerabilities to experience compassion fatigue. The influence of the workplace contributes greatly to the vulnerabilities in the psychological profile of the first responders, such as the lack of perceived hours of rest, lack of confidence and respect at work, extortion and things that violate the domain of justice and values, so that such things can undermine and weaken self-confidence as well as the ability to integrate and perform roles successfully. Besides, the unexpected death of someone close to the officer can trigger stress that ends in trauma and compassion fatigue. Therefore, it takes a good coping strategy and digestion in life to overcome the possibility of compassion fatigue. Further research is recommended on compassion fatigue experienced by the first responders in Asia, including shift work consequences and coping strategies for psychological disorders. In addition, it is necessary to investigate whether the compassion fatigue experienced by first responders active in disaster-prone environments affects their daily activities outside of work as first responders.

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